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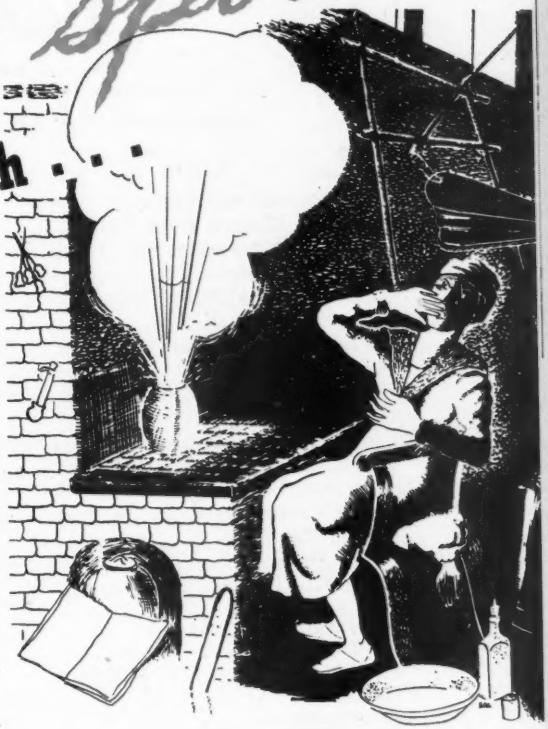
# A wild spirit

## Did Burst Forth . . .



ch men in the 16th century were as alchemists. One such, named John Van Helmont, made a startling dis- In his own words, he found that a crucible "did belch forth a wild spirit th." Thoroughly frightened, when he felt the presence of this spirit, it was for him to refer to it as a *geest,* which ed means *ghost.* Many feel that the contraction of this word became gas. Helmont's ghost no longer repels. and controlled, gas has become a cial and household necessity. From other early beginnings a great in- as sprung.

, the modern counterpart of the st delves into research that will further gress of the LP- GAS industry. Today, s, EMCO research and initiative will MCO Meters and Regulators in step e increasingly exacting demands for ment and control of this vital fuel.

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EMCO EQUIPMENT FOR LP-GAS MEASUREMENT AND CONTROL

Pittsburgh Equitable Meter Company

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LP-GAS DOES IT BETTER

# BUTANE-PROPANE *News*

Reg. U. S. Pat. Off.

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# LETTERS

• **Have you service or operating problems? Submit them to us and our technical department will endeavor to help you.—Ed.**

•

Gentlemen:

We are considering installing a bulk plant for liquefied petroleum gas, to be distributed through dealers for domestic cooking and heating.

As we are not familiar with this fuel, we would appreciate any information you may give us as to the advantages of butane and propane, or a mixture of gases. In other words, would you recommend that the installation be made for butane or propane, or a butane-propane mixture?

S. F. P.

Iowa

The only practical difference between butane and propane is the vapor pressure of the fuels. Butane vaporizes at 32° above zero, propane starts to vaporize at 44° below zero. Therefore, propane can be used under much colder climatic conditions than butane but because of this very fact it develops a higher vapor pressure under similar atmospheric temperatures and requires stronger containers to hold it.

Because butane was diverted from domestic channels during the war for aviation gas and synthetic rubber, many dealers have recently installed propane storage in order that they may receive shipments of either butane or propane in future times. Dealers who only had butane storage in recent years were handicapped because they could not store propane. —Ed.

•

Gentlemen:

I have a problem that I didn't know who to ask to get an unbiased reply. I have 22 cabins that range in cubic air space from 1280 to 2775 cu. ft. I want to install gas as heat, with temperature down to 40° below zero (at times).

When using propane gas, would you advise a floor furnace without a vent or a circulating heater with a vent? I think that with a vent I would lose too many Btu's through the vent.

How many 2500 size regulators would I need to supply? Would two, one on each 1000-gal. storage tank, be sufficient, one on each end of line?

T. C. W.

Wyoming

Our recommendation to you is that, insomuch as these cabins are rented to the public, a vented type heater should be installed.

The loss of heat from the vent may run as high as 25% but in a climate as cold as yours the tendency will be to close all doors and windows, resulting in the burning up of all the oxygen in the air and replacing it with $CO_2$, and if your appliances are not in good working order there is a possibility of carbon monoxide forming.

The heaters should be supplied with a source of air to support combustion as well as a vent to remove the products of combustion.

The regulators should be at the tank and the line should operate at low pressure to prevent condensation. Two 2500 regulators will carry a large load but you should add up the Btu. input of your appliances and then check with the regulator manufacturer who will be in a position to recommend the size and number of regulators.—Ed.

•

Gentlemen:

We supply an onion warehouse with propane for heating to a temperature of 32 degrees, using two 85,000 Btu unit heaters.

The job consists of 8 cylinders, four on a side, with a B-B automatic throwover.

We have run ¾-inch iron pipe the full length of the building—100 feet. From the end near the regulator we branch off for 30 feet with ½-inch tubing to one heater, and from the ex-

treme end of the ¾-inch pipe we branch off with 20 or 30 feet of ½-inch tubing to the other heater.

Will this pipe and tubing installation carry the needed pressure to properly operate these heaters?

H. C.

New York

The pipe sizes that you have selected should handle the load successfully.

You will be interested to know that in the "Bottled Gas Manual" (published by us) there is a chapter devoted to pipeline sizes and on Pages 70 and 71 is a table which will be directly helpful to you. This chapter is Number 8 and appeared serially in BUTANE-PROPANE News in the February, 1942, issue.—Ed.

●

Gentlemen:

We were advised by one butane company that they used the following method for unloading butane.

"In our properties, we have an Ingersoll-Rand air compressor, the inlet of which is connected to the top of our storage tank and the outlet is connected to the top of the tank car. When the compressor runs, the pressure is removed from the top of the storage tank and is increased on top of the liquid in the tank car. This permits the butane to flow rapidly into the storage tank and we can normally unload a car using this method in about two or three hours.

"Prior to the time this method was devised we merely exerted air pressure on top of the tank car without removing the pressure from the storage tank. It used to take anywhere from six to 10 hours. This method has an added advantage in that when the liquid has all passed to the storage tank, we can reverse the compressor and pull the vapor out of the tank car and put it into our liquid storage tank. In this way, we feel that we get all of the butane, even including the vapor, out of the tank car.

"I might add that in using this method in which our butane vapor is drawn through an air compressor, it will be necessary to use special oils, as ordinary oils will be broken down and contaminated by the butane vapor. We will be glad to give you information on proper oils if you desire it."

Please advise us if you think this method is satisfactory and if it is a safe method as far as explosion is concerned. I would also like to know if a special compressor is necessary to perform this job.

W. J. S.

Illinois

The compressor method of transferring liquefied petroleum gas from transport or tank car to storage is practical and is usual in many plants. The selection of a compressor is important as ordinary competitive air compressors are not always satisfactory.

Provision should be made to prevent liquid from entering the compressor and the motor and drive should be such as to pass electrical inspection.

Firms which advertise LP-Gas compressor units in BUTANE-PROPANE *News*, and therefore the ones which are catering particularly to this industry, are: Brunner Manufacturing Co., Utica, N. Y.; L. C. Roney, Inc., 1740 W. 59th St., Los Angeles.—Ed.

●

Gentlemen:

I wonder if you could advise me how in Missouri one could obtain a fuel user permit to install and burn butane on our truck.

P. O. Q.

Missouri

I am not familiar with the statutes of your state covering the uses of liquefied petroleum gas but suggest that you write to your Secretary of State for this information.

There has recently been organized in Missouri a state association of liquefied petroleum gas dealers. The secretary of this association is C. I. Stearns and his address is P. O. Box 88, Eldon, Missouri. I am sure that he will be helpful to you in obtaining the information you need.—Ed.

●

● **BUTANE-PROPANE** *News* **welcomes letters from our readers, but it must be understood that this magazine does not necessarily concur in opinions expressed.—Editor.**

# COMMENT

FOR the many who have inquired for a model bulk plant design, one answer will be found on Page 19.

Other lay-outs will follow soon.

Probably there really is no such thing as an ideal design, for every individual dealer has some special problem that would force deviation from a standard plan.

Select the best features from all offered—but make **safety** the keynote!

•

Hotels and restaurants will spend 2 billion dollars for rehabilitation as soon as manpower and materials are available. A fair percentage of this will be spread along rural highways and in small towns, especially on the main automobile routes.

What a market this is for dealers who keep their eyes open!

•

*Returning veterans do not have to join any labor union to obtain their former positions, according to Selective Service. The draft law doesn't provide for it and the draft law still holds.*

*Also, veterans have an absolute right to reinstatement to the jobs they left to enter service.*

•

The farmer really gets an "ear full" of the farm uses for B-P Gas in the September issue of "Cappers Farmer," rural journal of the great Southwest and Central states, and butane and propane get plugs that will make electrical competition fuss and fume.

The article is a capital one for consumer consumption, and dealers who want a general information pamphlet to distribute among prospects could do worse than order a few hundred reprints of it.

The Selz Organization, Chicago publicity agents for the Liquefied Petroleum Gas Association, is having large quantities of these reprints made. Send in your order if you want any. The cost will be nominal.

•

**A man gets safety-conscious rapidly when he's burned out. If others would only profit by his experience!**

**A Florida dealer lost his plant from a fire starting next door. He then evolved some sane safety rules to avoid any repetition of his loss. Maybe his rules would be good for you to follow before an accident occurs. (See page 33.)**

•

Trailers! Are you dealers interested?

Better be. A large percentage burn B-P Gas for cooking, water heating, and space heating. And trailer merchandising is so big a business that the Trailer Coach Manufacturers' Association will spend $150,000 next year for advertising alone.

How much does the B-P Gas industry spend to sell its products to consumers?

•

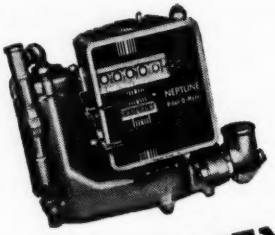
Huge expenditures of the war (and income taxes) have made everyone "billion-dollar-minded."

Not surprising then that a head in last month's issue read, "Retail Sales Approach Billion-Dollar Mark."

It meant "Billion-Gallon Mark," of course.

Even at that, maybe we should keep the head standing. It won't be long until it is a billion dollar industry!

By ED.



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Put this "mechanical brain" to work for you. Every gallon that flows through the meter is accurately summed up on the register for you. Furthermore, the Print-O-Meter Register duplicates the exact total *in print* on an invoice form at the pull of a lever. You avoid profit-stealing errors, speed handling operations, put every transaction on a business-like basis that builds good-will.

Get acquainted with all the advantages of accurate LP-Gas metering. Write for Neptune Bulletin 779 today.

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# MAINLY BEYOND THE MAINS

By ELLIOTT TAYLOR, Washington Editor

## More Gas

In the few weeks that have passed since the welcome advent of peace in the Pacific and the slightly less welcome cancelation of war contracts for high octane aviation gasoline, we have encountered a number of refiners who are casting appraising eyes on the liquefied petroleum gas market as a possible scene for their postwar development and expansion. Within the last month we have heard of five that are researching these market possibilities along the Atlantic seaboard and nearby states.

ELLIOTT TAYLOR

Some in this group are at present only potential producers; some have a limited output of butane and propane which they sold in the past to one of the principal refiner-marketers of liquefied gas; others have sold their entire output to a few large industrial users, while some have combined this with some tentative nibbling at the retail market in the territory immediately contiguous to the refinery.

To date we believe that none of the newcomers has settled on a selling policy for his liquefied gas. But there is every indication that there will soon be more producers and, consequently more liquefied gas offered for sale, as the conversion of high octane equipment to the normal output of civilian grade gasoline is completed.

But distributors and dealers now buy largely on contract from whatever supplier offers the most attractive proposition, and they probably are inclined to regard this as something for the producers to worry about.

They anticipate in the meantime that cheaper liquefied gas, particularly propane, will be available for them to sell to their customers—a distinct asset in meeting the competition of other and often cheaper fuels.

For several years now, or at least since the start of the defense and war programs, many producers concentrated on the industrial load as the easiest serviced and the most profitable outlet for the bulk disposition of any surplus butane or propane that they had to sell. The domestic and commercial load, generally serviced through the intermediate steps of distributor-to-dealer-to-consumer, was often

regarded as small potatoes, indeed. So any cultivation that the market had during the war was generally at the hands of the harassed and bewildered retailer who had to fight the WPB and the PAW to get his installations approved, and then had to battle the ODT and the railroads and the refiners all winter to keep his customers supplied with fuel.

The tide has turned now, and producers have suddenly awakened to a lively appreciation of the domestic load, and of thousands of individuals operating bulk plants and delivering cylinders who serviced and saved that load for the industry.

The refiners who conscientiously and consistently gave the best service that was possible under wartime handicaps, who looked after their old accounts even at the expense of adding some attractive new industrial load, are now reaping the reward of that farsightedness. For during the transition from war to peace production the industrial load is falling off rapidly, while the domestic utilization is on the increase. The domestic load is right now the mainstay and salvation of the liquefied gas industry; it is probably destined to remain so during reconversion, and it is the so-called little men, the small fry in the industry, who have hung onto it and preserved it for this day.

We are convinced that the heyday of the distributor and dealer is at hand. To begin with, he is by and at large in a position of financial freedom perhaps f the first time since he went in business. He will thus be able t contract for his gas supply unde the most advantageous and inde pendent auspices. He will be op erating as a purchaser of gas i what promises to be a buyer' market, but he will be selling i a field where the backlog of un filled consumer demand will cre ate conditions most propitiou for intensive selling activity Those selling in rural areas wi find farm income high, and farm indebtedness reduced to abou one-half of what it was when i hit an all time peak shortly afte the first world war. The treasury department reports that farmer now have over 10 billion dollars in war bonds and liquid cash assets.

It is true that the rural elec trification program, under the subsidized REA as well as in the plans of the privately owned util ities, is going to mean stimulat ing and formidable competition But selling the farm market is much more a matter of price than the fancy dan economists who make up the sales plans will ever admit, and cheaper propane with rugged and efficient appli ances to utilize it, should serve to hold the high priced and gen erally slow electrical equipment in the secondary position that it now occupies.

## Dealer to Distributor?

We have talked to dealers re cently who are anxious to branch

out into a combination distributor and dealer operation, building bulk storage facilities. Expansion is always a laudable ambition, but the potential operation should be carefully analyzed on a cost accounting basis before being undertaken. A rule of thumb estimate sometimes made is that from 900 to 1000 domestic accounts are required to justify the operation of a bulk plant in the propane area, where the average consumption of gas is from 12 to 15 gallons per customer per month.

Of course, cheaper propane, when and if it becomes generally available, will result in increased consumption, and increased consumption might well justify an investment in bulk facilities predicated on this anticipated increase in gallonage sold.

Dealers who may plan to sever their present distributor connections should ponder the possibility, even the likelihood, that the first move of an abandoned distributor would be to attempt to set up a new dealer in any territory lost through the cancellation of contracts with his present retail outlet. Also to be taken into consideration, is the service rendered by the distributor, in many instances amounting to that of a combination jobber and financing agency, whereby his dealers are enabled to handle retail sales on time payment plans that might be difficult to arrange with local banks.

Other factors that should be clearly understood include the question of whether the distributor or dealer owns the retail accounts. In a recent transaction brought up for financing, the retail value of a large liquefied gas distributing operation was appraised at $175 per customer. Where such values are involved it is reasonable to assume that the distributor has attempted at least to retain ownership of accounts and to that end has written the best legal protection possible into his dealer contracts.

The established trade name may also be of considerable value in a territory, and that name may not be available to a dealer who severs his distributor connections. Where good service has prevailed, however, and where the dealer has identified himself and his local organization with that service, it is questionable whether the loss of a synthetic trade name would be an insurmountable obstacle.

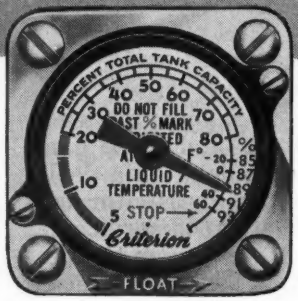
By and at large we can only repeat in print the observations that we have made in numerous conversations—that it is wise to make haste slowly, and that there is plenty of profit immediately ahead in good merchandising operations by dealers selling installations, appliances, and equipment for both old and new uses of gas. Stepping into a bulk plant operation involves a big responsibility; before it is undertaken it should be analyzed from every angle, personal, as well as legal and financial.

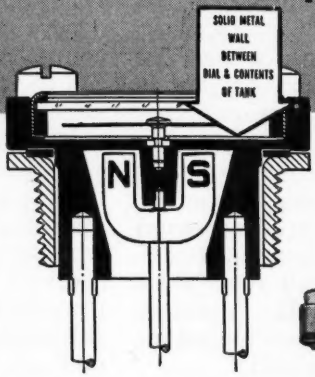
# *Explosion-Proof...*

## ACCURATE...

## RUGGED...

**YOU CAN SPECIFY ROCHESTER L-P GAUGES in perfect confidence. Model 3120 is adaptable to any shaped tank**




This cross section illus Rochester's magnetic dial curate liquid level is in ed without connection be center shaft and gauge h Equally important, no lea can occur, a safety fact prime importance.

New stee protects t shaft from age durin stallation field oper It adds of extra S an alread dy gauge, is only o many wa improve you now with Ro ter's peac products.

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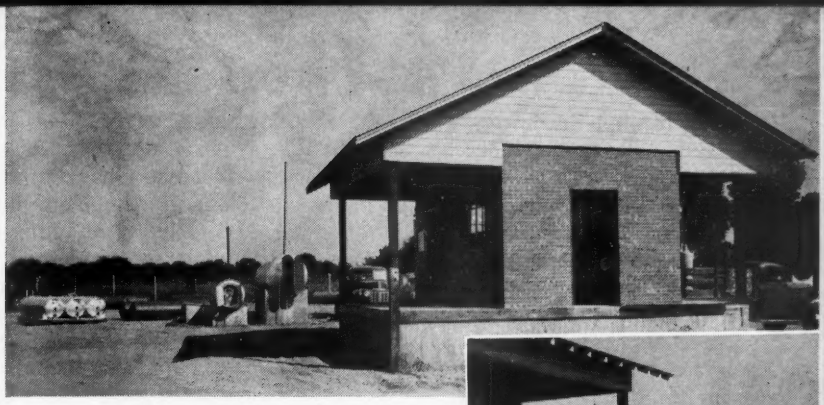


Fig. 1 (above). General view of bottling and bulk plant of American Butane and Propane Gas Co., Oklahoma City.

Fig. 2 (right). Loading 100-lb. cylinders for distribution to users.

# Building A Modern Bulk Plant

By O. D. HALL

PLANT facilities for handling a quarter-million dollars' per year sales volume have been provided by the American Butane & Propane Gas Co., Oklahoma City. The bulk and bottling plants recently have been enlarged and relocated near the center of the company's 1-acre lot, with plenty of space reserved for future plant expansion.

A 70 x 80-ft. space between the shop and office buildings has been paved with concrete and the 890 sq. ft. area back of these buildings surrounding the bulk and bottling plants, is now being paved with asphalt. This will give free and easy access in all kinds of weather to all plant facilities for trucks and other motor vehicles of the firm and its customers.

The American Butane and Propane Gas Co. plant, fronting on Exchange Ave., a busy, paved thoroughfare in a growing industrial district, is surrounded by a 6-ft., chain wire fence with ample vacant space inside for storage of a large stock of B-P Gas tanks of various capacities now in stock. Some of these tanks are left over from cancelled war contracts. They are now moving as rapidly as the firm can secure other equipment and make installations.

J. L. Grigsby, president of the company, announces that as soon as possible, probably by the first of next year, offices will be provided

in the shop building for the sales manager and his force which will be expanded to 20 men for the Oklahoma City district. The sales managers office is now housed in the east building, a 40 x 80-ft., fireproof, 1-story, brick and steel structure, in which is also located the executive and display offices and sizeable parts and stock departments.

The shop building is an exact duplicate of the office building in size and type of construction. It is modernly equipped for conversion of trucks and other motorized equipment to B-P Gas-powered operation and for maintenance and repair of carburetors, company trucks and other equipment.

Mr. Grigsby announces plans for expanded conversion of industrial trucks and machinery to B-P Gas operation. His firm is state distributor for "Algas" carburetors and plans also include establishment of branch offices at Norman, El Reno and Guthrie, with a local manager and a sales force of five men at each. These branches will handle B-P Gas appliances and service and will be the centers for

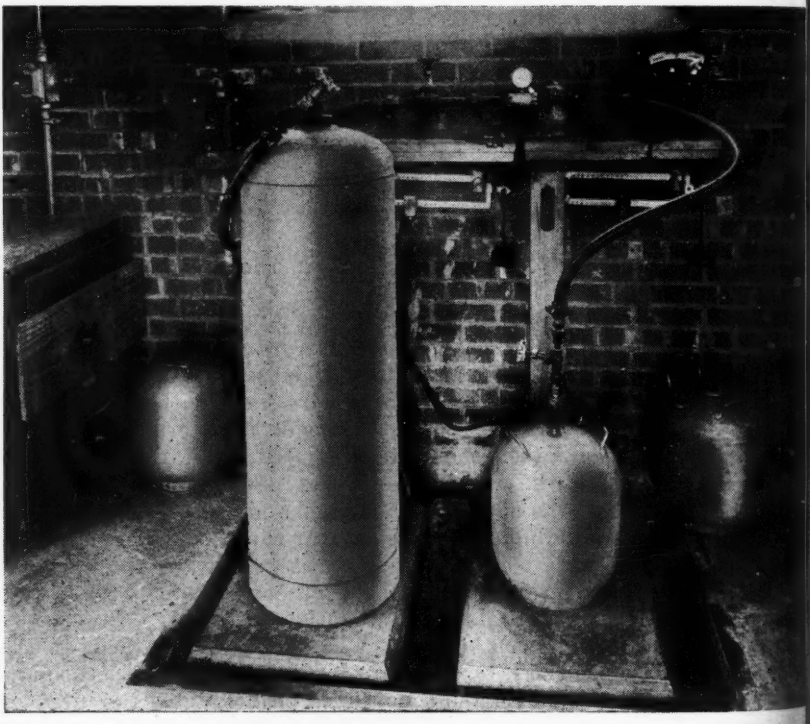


**Fig. 3. Filling and weighing cylinders.**

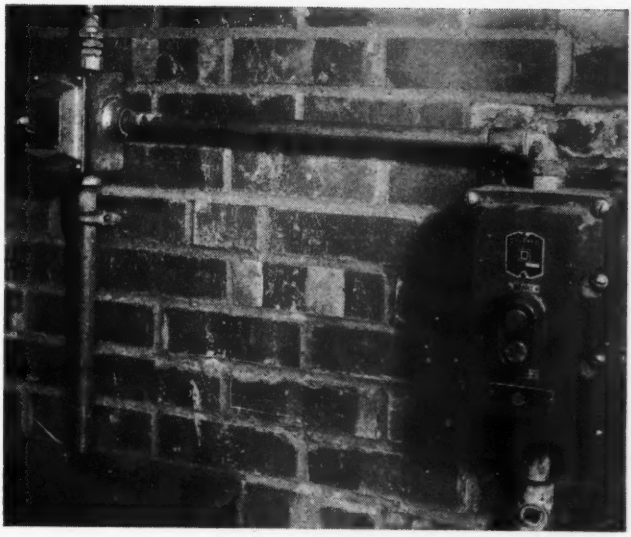


Fig. 4. Detail of electric switches inside of bottling plant.

sales in the surrounding territory.

The recently enlarged bulk and bottling plants of the company at Oklahoma City headquarters will be able to handle all business coming through the main and branch offices for some time, but plans include space for further expansions when required. The bulk and bottling plants are illustrated in the accompanying pictures, with detail descriptions as follows:

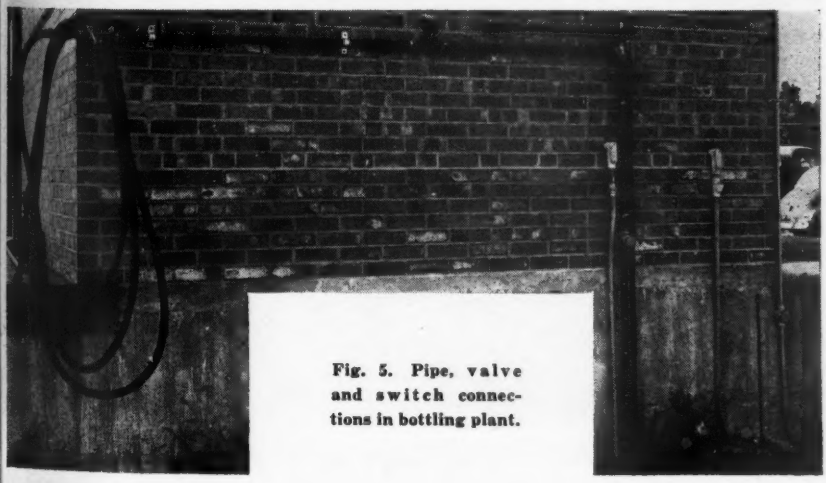


Fig. 5. Pipe, valve and switch connections in bottling plant.

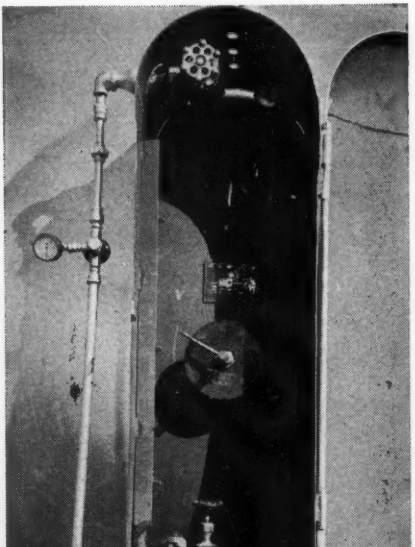


Fig. 6. Head assembly of 2900-gal. propane storage tank.

Fig. 1. General view of bulk and bottling plants of the American Butane and Propane Gas Co. The bottling plant (right foreground), is modernly equipped inside for filling and weighing cylinders and bottles and has ample concrete loading docks.

Thirty-five feet to the rear (left center) are the 1475-gal. (water capacity) butane storage tank and (to its right) the 2950-gal. (water capacity) propane storage tank. On top of latter are two 2-in. American Car and Foundry safety relief valves which operate at 240 lbs. On top of butane tank is one 2-in Bastian & Blessing safety valve operating at 180 lbs. In background is seen part of a large stock of private system tanks.

Fig. 2. Weldon Pugh, production superintendent, is loading 100-lb. capacity propane cylinders from east dock of bottling plant. These cylinders, some owned by the firm and others by users, are supplied for gen-

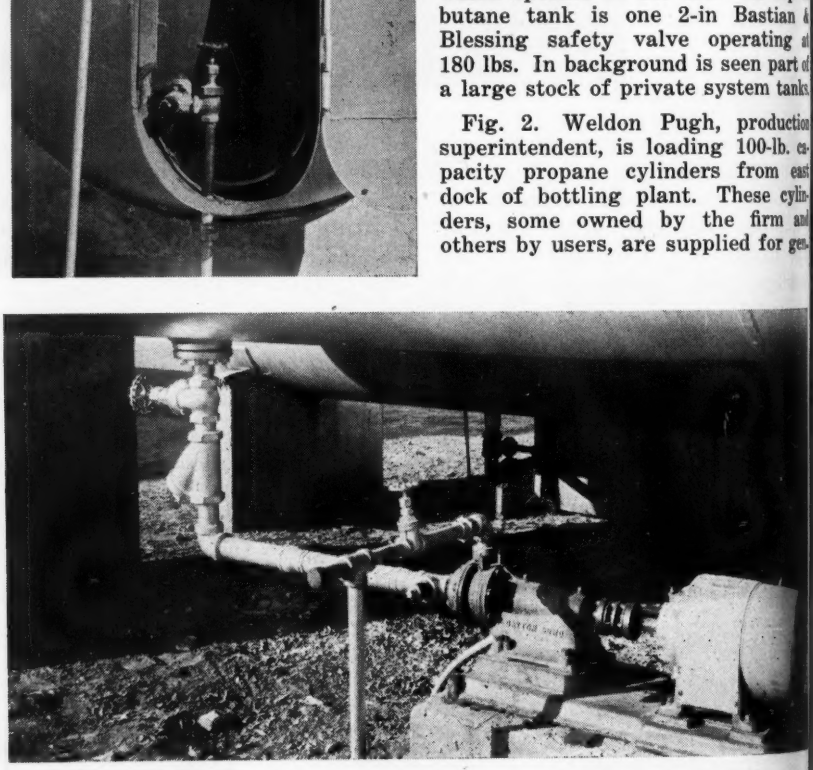


Fig. 7. Propane pumping unit and motor.

eral industrial, cutting, plumbing, welding, melting pot and domestic purposes. Several hundred per month are filled for the Rock Island Railway Co., for cooking on diners and for air-conditioning passenger cars.

Fig. 3. A 100-lb. capacity cylinder and 20-lb. bottle are being filled with propane, while weight is being registered on two 200-lb., Howe platform scales. Note at right over scale the Detecto-Gram over and under indicator gage, manufactured by the Detecto Scale Co., Inc., Brooklyn, N. Y. This device starts moving slowly when within 5 lbs. of the filling capacity weight to give the cylinder filling attendant time to shut off the B-P Gas immediately after bottle is filled to capacity. Since this picture was taken a second Detecto-Gram has been installed over scale at the left.

Other equipment inside bottling plant (left to right), includes: (1) Grouse-Hinds vapor-proof light switch (2) Square D safety starter switch (3) Black, Sivalls & Bryson 500 lbs., pressure gage.

One-half inch filling hose, shown on top of bottles, connects with ¾-in. manifold piping bringing the propane

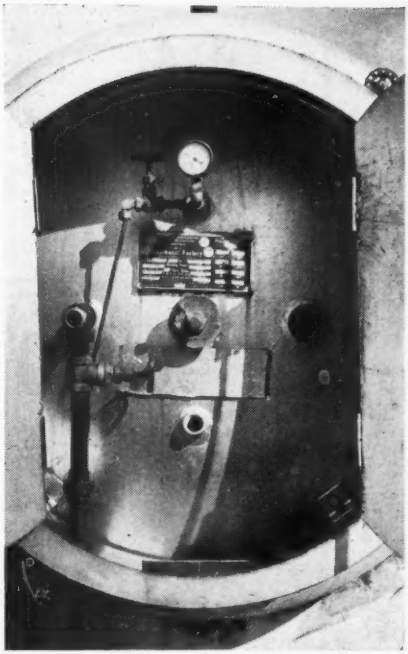


**Fig. 8. Head assembly for the 1475-gal. butane tank.**

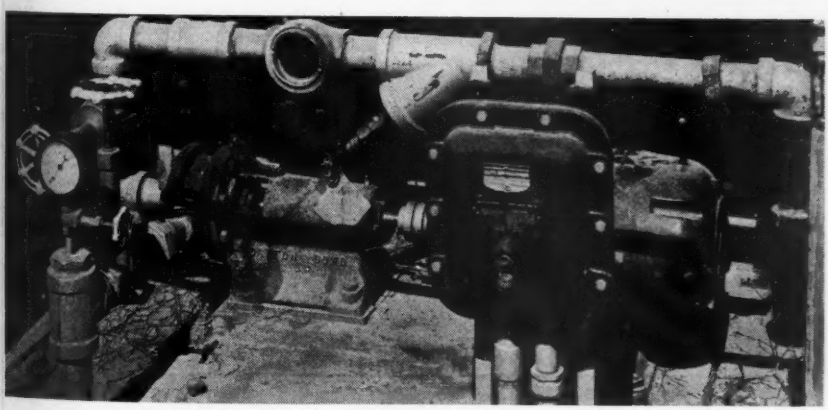
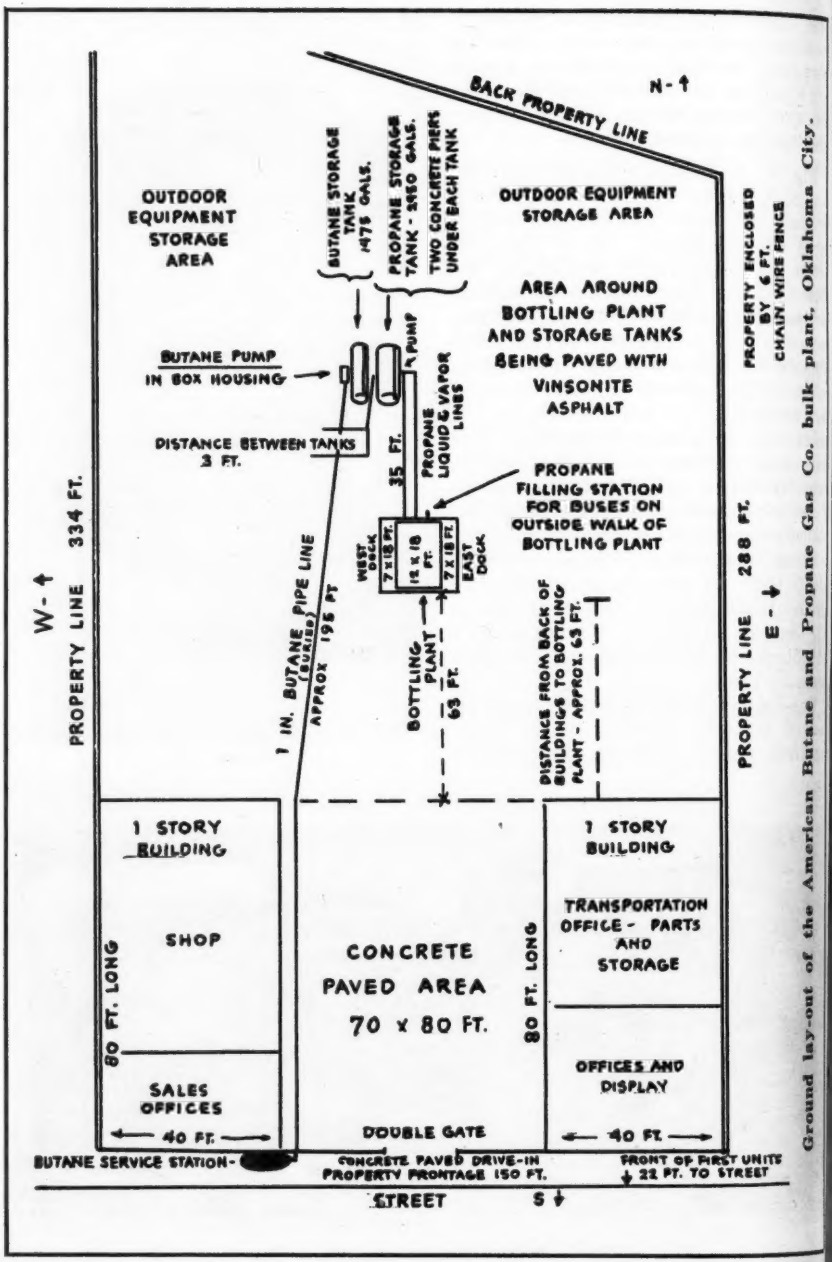


**Fig. 9. Butane pumping unit and motor.**


BACK PROPERTY LINE
N-↑
OUTDOOR EQUIPMENT STORAGE AREA
BUTANE STORAGE TANK 1475 GALS.
PROPANE STORAGE TANK - 3950 GALS.
TWO CONCRETE PIERS UNDER EACH TANK
OUTDOOR EQUIPMENT STORAGE AREA
AREA AROUND BOTTLING PLANT AND STORAGE TANKS BEING PAVED WITH VINSONITE ASPHALT
PROPERTY ENCLOSED BY 6 FT. CHAIN WIRE FENCE
BUTANE PUMP IN BOX HOUSING
PUMP
DISTANCE BETWEEN TANKS 3 FT.
35 FT.
PROPANE LIQUID & VAPOR LINES
PROPANE FILLING STATION FOR BUSES ON OUTSIDE WALK OF BOTTLING PLANT
WEST DOCK 7 X 18 FT.
12 X 18 FT.
7 X 18 FT. EAST DOCK
1 IN. BUTANE PIPE LINE (BURIED) APPROX 196 FT
BOTTLING PLANT 63 FT.
DISTANCE FROM BACK OF BUILDINGS TO BOTTLING PLANT - APPROX. 63 FT.
W-↑
PROPERTY LINE 334 FT.
PROPERTY LINE 288 FT.
E-↓
1 STORY BUILDING
SHOP
80 FT. LONG
SALES OFFICES
40 FT.
CONCRETE PAVED AREA 70 x 80 FT.
80 FT. LONG
1 STORY BUILDING
TRANSPORTATION OFFICE - PARTS AND STORAGE
OFFICES AND DISPLAY
40 FT.
DOUBLE GATE
BUTANE SERVICE STATION-
CONCRETE PAVED DRIVE-IN PROPERTY FRONTAGE 150 FT.
FRONT OF FIRST UNITS 22 FT. TO STREET
STREET
S↓

Ground lay-out of the American Butane and Propane Gas Co. bulk plant, Oklahoma City.

gas from storage tank, 35 ft. to rear. A 5-in., ground cable connected to manifold is a safety device to ground static electricity. A ¾-in. vapor return line connects to propane storage tank. Piping and valves are by Crane Co., Chicago.

Fig. 4. Close-up view of 20-amp electric light switch (at left) and Square D No. 2510-W starter switch. These switches are vapor and explosion proof and connected to ¾-in., conduit pipe.

Fig. 5. Piping, valve and switch connections on the back side of the bottling plant (right to left): Appleton electric junction box, set in ¾-in. conduit; Grouse-Hinds conduit junction box in ¾-in. conduit and similar installation at left of black pipe all connect to switches inside plant to turn on lighting and start propane pumping unit.

Black piping along wall includes 15 ft. of 1-in. liquid gas pipe and 10-ft. of ¾-in. vapor gas pipe connecting propane storage tank to bottle filling equipment inside building. Gates rubber hose (27½ feet of ⅝-inches) equipped with Bastian-Blessing filler valve is used in filling fuel tanks of Oklahoma Railway Co. buses operating between Oklahoma City, Douglas plant, Tinker and Will Rogers fields. Thirty-five feet of each size of black pipe shown here runs 2 ft., underground to propane tank in rear of bottling plant.

Fig. 6. Head assembly of Black, Sivalls & Bryson propane storage tank includes a rotary gage by L. C. Roney, Inc., Los Angeles, two Black,

**Fig. 10. Oklahoma City street trucks, using butane for motor fuel, are "filling up" at dispenser tanks.**

Sivalls & Bryson 300-lb. gages and a ⅜-in. Crane valve. This tank is 5 ft. in diameter by 20 ft. long and has a capacity of 2950 gals. (water capacity). It is set on two concrete piers.

Fig. 7. This 3-hp., Dayton-Dowd pump and U. S. Electrical Motors (Milford, Conn., and Los Angeles), power unit supplied by Corken's, Oklahoma City, is mounted on a concrete foundation beneath the propane storage tank which it serves. It has a 15-gal. per minute pumping capacity. It is connected to Crane piping, fittings and valves.

Fig. 8. Head of Southwest Factory butane storage tank rated for 125 lbs. pressure at 100°. Equipment includes an L. C. Roney rotary gage and a 200 lbs., U. S. pressure gage. This 1475-gal. (water capacity) tank is 3.5 ft. in diameter by 23 1/6 ft. long and is set on two concrete piers.

Fig. 9. This Masters 2-hp., single phase motor and 40-gal. per minute, Dayton-Dowd pump, equipped with Cutler-Hammer motor control switch and 300 lb., U. S. Gage, with Crane valves and fittings, is housed in a weather-proof box on the ground beside the butane storage tank. This butane pumping unit, controlled through a lever at the butane filling station in front of the shop building, forces butane through the filling station units.

Fig. 10. Two water tank flusher trucks of the Oklahoma City street maintenance department, powered with butane gas, are here being refueled at the motor fuel service station of the American Butane and Propane Gas Co. These B-P Gas units are encased in Bowser gasoline filling station housing. A Smith Meter Co. butane meter and two 300-lb. U. S. gages are connected to a 1-in. butane pipe line which extends 195 ft. from the butane storage tank to the filling units.

By simply raising a lever the filling station operator starts by remote control the motor on the butane pump at the storage tank. Four of these city water flusher trucks are fueled regularly at this station, which also serves the general public.

## Seven 25,000-Gal. Propane Tanks Purchased by Boston Co.

Stacey Brothers Gas Construction Co. of Cincinnati announces the awarding of a contract to their company by The Boston Consolidated Gas Co., of Boston, Mass., to install a complete butane-propane-air gas mixing plant, with a capacity of 10,000,000 cu. ft. per day, at Boston Consolidated's Everett, Mass., works.

A. E. Harvey, vice president of Stacey Brothers, reports that the project will involve the installation of seven 25,000-gallon vertical type propane tanks, a new mixer building and other appurtenances. The installation will be used as stand-by storage to take care of peak loads in the Boston area and is expected to be completed in the fall.

Already under construction by Stacey Brothers for this company is a 1,000,000-cu. ft., all-welded holder, designed with an internal tank for the storage of 2,329,500 gallons of oil.

Stacey Brothers Gas Construction Co. is one of the Dresser Industries.

## Texas-California Line Planned by El Paso Natural

El Paso Natural Gas Co. is reported to have filed application with the Federal Power Commission for permission to construct and operate a 26-in., 720-mile natural gas pipe line from Lea county, New Mexico, and other fields, to the east bank of the Colorado River, due east of Blythe, Calif.

# Every Member Will Have 1 Vote In Reorganized LPGA

## Seven Sectional Groups Formed

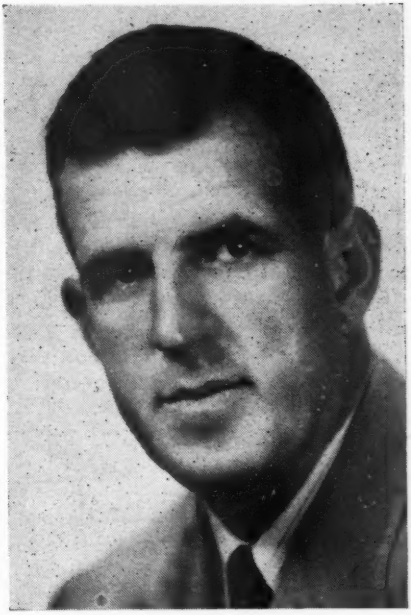
CONSOLIDATION of the Liquefied Petroleum Gas Association and the National Butane-Propane Association was attempted at a joint meeting of the boards of directors of the two organizations in Chicago on Sept. 21-22, but a final agreement was not effected. However, the LPGA was completely reorganized, following a membership vote by mail.

The name, "Liquefied Petroleum Gas Association," was retained for the combined groups. New articles of incorporation and by-laws were adopted and new officers elected.

Ernest Fannin, Fannin's Gas and Equipment Co., Phoenix, Ariz., was named the new president, succeeding himself from the old association; H. K. Strickler, The Protane Corp., Erie, Pa., becomes first vice president, and Charles Russell, Thermogas Co., Des Moines, Iowa, second vice president, while Maj. Frank Fetherston will serve as secretary-treasurer.

These officers, the directors and the executive committee will serve for the balance of this year. Thereafter, annual elections will occur.

Those attending the Chicago meeting were enthusiastic over the opportunity that now exists to make the new association one of great value to its membership and the industry, as a whole. In commenting on the situation after the meeting, President Fannin said:



ERNEST FANNIN

"I feel confident that we are well on the way to a better and much stronger association to represent the entire industry.

"Much work is yet to be done but the groundwork has been laid and the 1946 board of directors can carry things through to an amicable solution. Present board mem-

Fig. 1. The seven sectional divisions of the Liquefied Petroleum Gas Association.

H. K. STRICKLER

CHARLES RUSSELL

bers can be depended upon for assistance and counsel.

"There have been some differences of opinion, as there must be in any democratic group. The test is in the evolvement of a strong, satisfactory solution of all of our problems. Under the new arrangements the industry has a representation extending into every part of the country and every phase of industry operation."

The original LPGA was organized in 1938, being the outgrowth of The National Bottled Gas Association, founded in 1931.

The National Butane-Propane Association was incorporated last May with the expressed desire of extending specific benefits to the liquefied petroleum gas industry, as a whole. The Liquefied Petroleum Gas Association was already working on a plan to broaden its scope, and when it was found that many of the objectives of the two associations largely paralleled each other, efforts were started to consolidate them in the best interests of both groups.

Following a joint meeting of the directors of the two associations, the LPGA prepared new articles of incorporation and by-laws, including the provision both had agreed upon, and sent copies to all members for a vote by mail. The resulting vote heavily approved the consolidation and the Sept. 21 meeting resulted.

An executive committee of 24 members and a 55-man board of directors was elected by mail.

Other important proposals submitted to members by mail, and approved, constituting changes from the old by-laws, include the following:

One director shall be elected from each state.

The United States shall be divided into seven sections. Each section shall select one of its members as chairman, and this chairman shall become an association vice president and become an additional member of the board. Sectional divisions are shown in Fig. 1.

The president shall be elected by the voting membership, and the executive vice president shall be selected by the executive committee.

Memberships are designated as Active, Individual Affiliate, Association Affiliate and Honorary.

Active members are individuals, firms or associations actually engaged in the production or sale of liquefied petroleum gas in tank car or truck transport quantities; operators of bulk storage facilities for resale to consumers or dealers; manufacturers, assemblers and marketers of equipment and appliances. Active members, only, are privileged to vote and every Active member has a single vote.

Employes of Active members may

Fig. 1. The seven sectional divisions of the Liquefied Petroleum Gas Association.

F. R. FETHERSTON

KENNETH RUGH

become Individual Affiliate members.

Local, state and regional associations and individuals not coming under other classifications may become Association Affiliate members.

Honorary members shall be individuals or firms elected to membership in recognition for special accomplishments of value to the industry.

Dues shall be based upon the following schedule:

| Group | | Annual Gross Sales in B-P Gas Industry | Dues |
|---|---|---|---|
| 1 | Less | than $25,000 | $ 50 |
| 2 | Over | $ 25,000 to $100,000 | 100 |
| 3 | " | $100,000 to $250,000 | 250 |
| 4 | " | $250,000 to $500,000 | 500 |
| 5 | " | $500,000 to $750,000 | 750 |
| 6 | " | $750,000 to $1,000,000 | 1000 |
| 7 | " | $1,000,000 | 1250 |

Individual Affiliate members, $7.50 minimum. Association Affiliate members, $25 minimum. Honorary members, no dues.

At the September meeting, disagreement upon an executive vice president, amount of his salary, and payment of the indebtedness of the NBPA blocked consolidation. However, President Fannin has since been authorized by the Executive Committee to appoint a committee to select such an official at once.

Reports were made by the following committee chairmen: Kenneth Rugh, Reorganization; E. Carl Sorby, Publicity; Frank B. Boice, Legislative; Ellsworth L. Mills, Safety; H. Emerson Thomas, Insurance, Transportation; Walter Verkamp (R. H. Wherry, acting chairman), Pamphlet No. 58, NBFU; Walter A. Naumer, Finance.

The board of directors is composed of the following members:

L. Abramson, Jr., C. M. Ambrose, Jr., E. Martin Anderson, P. A. Anderson, G. W. Bach, Lee H. Barker, F. B. Boice, R. S. Bowers, G. L. Brennan, G. A. Burrell, R. J. Coughlin, S. G. Darling, H. H. Dauphinee, Kenneth Dickson, George F. Eiker, Ernest Fannin, R. E. Forsberg, L. R. Forsyth, W. E. Fraley, F. F. Hampson, L. L. Harms, B. T. Harris, H. H. Henley, W. T. Joplin, Samuel Kapnek, K. H. Koach, F. N. Mabee, S. S. Margulies, J. Woodward Martin, D. O. Mecklenburg, Herman Merker, Joseph Miller, Walter H. Miller, Ellsworth L. Mills, V. J. Mueller, Walter A. Naumer, V. W. Packard, Hermann Paris, L. V. Rothrock, K. W. Rugh, Charles O. Russell, Earl C. St. Cyr, T. A. Sacra, E. Carl Sorby, H. K. Strickler, H. C. TenBrook, H. Emerson Thomas, Byron Thornton, Harry H. Torbit, Selwyn Turner, W. F. Verkamp, J. Richard Verkamp, H. Merrill Winner, O. P. Wright, W. H. Wulf.

This is the executive committee:

C. M. Ambrose, Jr., P. A. Anderson, F. B. Boice, G. L. Brennan, Ernest Fannin, M. G. Farrar, W. E. Fraley, Walter Hoagland, W. T. Joplin, Gene McDonald, F. N. Mabee, Ellsworth L. Mills, Walter A. Naumer, V. W. Packard, Hermann Paris, K. W. Rugh, Chas. O. Russell, T. A. Sacra, E. Carl Sorby, H. K. Strickler, H. Emerson Thomas, Harry H. Torbit, Selwyn Turner, Walter Verkamp.

# ICC Gives Southwest Group Decision In Rail Rate Case

THE following report has been made upon the liquefied petroleum gas rate case which has been under consideration for more than two years and upon which the Interstate Commerce Commission rendered its decision on Aug. 10:

K. H. KOACH

"The entire Commission, with two members dissenting and Commissioner Johnson not sitting, affirmed by a vote of 8 to 2, the previous report and finding of Division 2 on this case in all respects except that the provision that future rates shall not exceed 140% of the going gasoline rates, which under the previous decision did not apply 'to the water-compelled rates on gasoline from the New Orleans-Baton Rouge Group', shall not now apply 'to the emergency rates on gasoline to Florida destinations'.

"Emergency rates were established to Florida points and also to most of the rest of the Southeast as a war measure, and generally reflect a reduction of 25% in the normal rates. The 140% provision would not affect the rates to other points in the Southeast except to certain Florida points and therefore the exception now made applies only to the Florida points.

"The result is a 100% victory for the committee on freight moving to all interior points in Southeastern territory. Where the rates had been reduced below the basis previously prescribed for gasoline, they will now be allowed to be put back on that basis, subject to the condition that except the water-compelled rates from the New Orleans-Baton Rouge Group and the emergency rates to Florida, the rates shall not exceed 140% of the going rate on gasoline.

### Thirty Days to File Rates

"Under the Commission's order, the tariffs under suspension are to be cancelled on or before Sept. 11, 1945. Tariffs publishing rates authorized will have to be worked out and filed on thirty days' notice.

"On Aug. 16th, the National Butane-Propane Association, in their Bulletin No. 3, commented on the case at some length. It is the opinion of the Rate Case Committee that this bulletin is in error on two counts. First, it states that the rates prescribed are to be 140% 'of those set for gasoline', when, as heretofore stated, the rates are to be the same as those set as maximum rates for gasoline, subject to the 140% limitation. Second, the bulletin states, 'Railroads are ordered to put the new formula of rates into effect not later than Sept. 11, 1945.' The fact is that the carriers are ordered to cancel the suspended tariffs by Sept. 11, which leaves present rates and weights in effect. The carriers are authorized, but not required, to publish the in-

creases which the decision permits at such time as they may see fit. Otherwise, the bulletin seems to be correct.

"We believe that this decision concludes the work of the Rate Case Committee. Your Committee has, during the past several years, met on a number of different occasions at Louisville, Ky., Chicago, and Washington, D. C., attended hearings, and has done everything in its power to bring about a successful conclusion of this case. Through the able efforts of its attorney, J. V. Norman, a victory has been consummated and the committee takes pleasure in presenting this favorable and final report.

### Saved $700,000 in Two Years

"For nearly two years the industry in the South and Southeast has enjoyed the old rates with a reduction in the weight of 6.6 lbs. per gallon to 4.7 lbs. per gallon, and according to the railroads, the difference in the charges which the industry has paid during that period, and the charges it would have paid under the proposed increase rates, amounts to approximately $700,000. It is difficult to estimate what the saving will be under the rates now authorized, but the Interstate Commerce Commission estimates that the rates now authorized, when applied to the traffic moving, would result in an increase of present charges of about 15%.

"To those contributors who are located in areas which were not involved in this particular case, we suggest that application be made to the carriers at once to change the weight basis on which your transportation charges are computed. It is possible now that a conclusive decision has been issued by the Commission, that some voluntary action will be taken by the carriers handling this traffic in territories other than that involved in this specific case, to line up their rates accordingly; however, it might require some effort on the part of interested shippers to set rate revisions in motion, and the more numerous the requests, the better the chances of success. If the carriers refuse to respond then, of course, the only alternative is to apply to the ICC.

### Established Lower Weight Basis

"The primary objective of your committee was to effect a correction of the weight basis of 6.6 lbs. per gallon, which applied prior to filing of the original complaint. As stated, this has been accomplished (now 4.7 lbs. per gallon), and realized where shipments move on the so-called normal gasoline rates in the territories involved in the proceedings just concluded. We believe that this principle has been definitely established for general application except, of course, for conditions where the going rates on gasoline have been previously and voluntarily reduced due to circumstances and conditions peculiar to gasoline movements, but not particularly applicable to liquefied petroleum gas.

"Since the basis for normal gasoline rates in various parts of the United States differ according to transportation conditions, it can be appreciated that the application of this principle in different localities may have some variations. For example, the so-called *arbitraries* have been reinstated under conditions peculiar to the Florida Peninsula.

"Doubless, there are other sections of the country where similiar adverse situations prevail, but this is certainly no reflection on the specific case at hand, which definitely establishes a precedent for the assessment of lower charges on liquefied petroleum gases. Therefore, it is urged that shippers in territories outside of that covered by the proceedings herein discussed

promptly negotiate for such adjustments as may be properly applicable in their respective localities. Your committee believes that its efforts have paved the way for equitable rate adjustments on liquefied petroleum gas shipments to all territories. The precedent has been definitely established.

"When contributions were originally solicited, we expected the final decision to apply to all shippers of liquefied petroleum gas both inside and outside the Southeast territory to which this final decision is now confined. However, we believe shippers who are located in areas not directly affected by this decision will finally receive all or considerable deductions on account of the precedent established in this case.

"Signed

"Rate Case Committee

"Chairman: K. H. Koach, Green's Fuel, Inc., Sarasota, Fla.

"Arthur K. Lee, United Cities Utilities Co., Chicago, Ill.

"R. C. Weis, Weis Butane Gas Co., Wheatley-Blytheville, West Memphis, Ark.

"C. W. Guy, General Gas Corp., Baton Rouge, La.

"Selwyn Turner, National Butane Co. of Ala., Inc., Mobile, Ala.

"Hermann Paris, Georgia Butane Gas Co., Sandersville, Ga."

# Dealer Develops Safety Rules From Plant Loss By Fire

ONE dealer who has formulated his set of safety rules the hard way is John V. Williams, manager, Sungas Co., Miami, Fla.

As a result of a fire which started at the Franklin Oil Co., adjacent to Sungas, flames swept through properties of Sungas and leveled buildings and equipment.

Temporary offices have been set up and deliveries are being made by this company from loaded trucks which were taken home by the drivers and therefore escaped destruction.

Conclusions reached by Mr. Williams are of value to dealers in taking precautions against a similar disaster:

1. Watch your neighbors—don't let a fire hazard move next door.

2. If your office is located at your plant, keep *all* records in a "four-hour" safe, including customer contracts. Don't trust a letter file.

3. Have a second storage tank at a different location.

4. Have replacement parts (pumps, motors, etc.) stored at a different location.

5. Carry enough insurance, placing new equipment on policy as soon as possible.

6. Have drivers take trucks home at night with a full load of cylinders.

7. Don't use your cylinders as storage, get them out to the customers.

8. Keep on good terms with your competitors. Help them and they will help you.

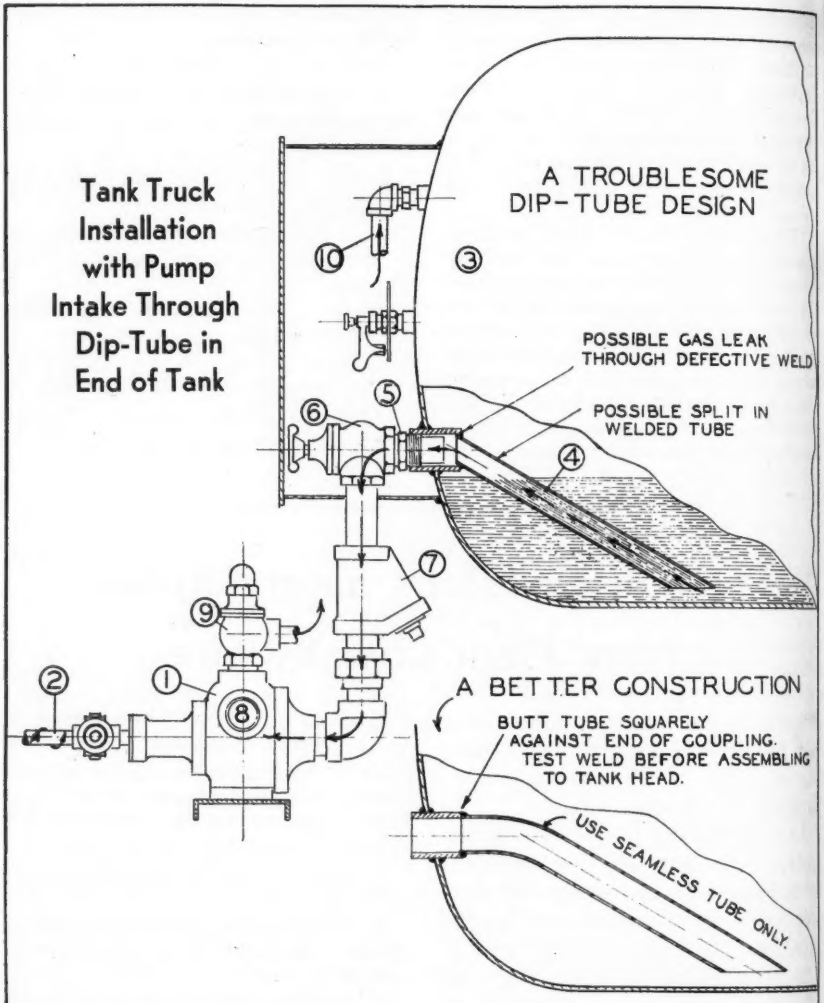



**Fig. 1. In sketch above, pump (1) is driven by power take-off shaft (2). Propane flows from tank (3) through dip-tube (4), excess flow valve (5), angle-valve (6), strainer (7), and into pump, discharging through outlet (8). By-pass (9) is connected to discharge back to tank through fitting (10).**

# PUMP PROBLEMS

By R. STANLEY SMITH

Manager, Smith Precision Products Co., South Pasadena, Calif.

MANY readers have expressed their appreciation for the articles we have presented in the last several issues under the title of "Pump Problems," and some have contributed ideas of their own.

We have also received many requests for complete detail design suggestions for tank truck pump installations, as well as for bulk plant layouts, with advice on the best possible piping arrangements for each use.

We are quite sure that at this time it would be impossible for anyone to present a perfect installation plan which would be adaptable to all the varying requirements and conditions to be found in this field. However, we feel that to point out the more important features necessary for successful operation, and to call attention to errors of construction which have been found undesirable, will do much toward bringing about an eventual standardization of installation practice of benefit to all.

No doubt many plants now being built will have outstanding features of improved construction, while, at the same time, incorporating some errors which will prove troublesome. This, of course, is to be expected in any new field, and it is for this reason we feel that an exchange of ideas among those engaged in this work should be promoted and would be very helpful to the entire industry.

In this issue we wish to quote and comment on a few suggestions and questions which have been presented by our readers. Paul G. Boyd, vice president of Airlene Gas Co., Inc., Fulton, Kentucky, writes as follows:

"Your articles on pumping problems are timely and of value. Perhaps many companies have worked out such problems but each person can learn from the experiences of others.

"For example, several years ago we had considerable trouble with a pump vapor-locking while pumping liquid from the tank car to storage, and could not get all the liquid from the tank car either. Now we use both pump and compressor and build a 10-lb. head in the tank car before opening the liquid lines. Our flow from the tank car is 3,000 gallons per hour through a 2-in. liquid line."

The use of a vapor compressor to increase the head pressure in the storage tank, from which fluid is being pumped, should be very helpful, particularly where the existing lines to the pump are inadequate in size, or present considerable resistance. Any means to insure an ample supply of liquid to the pump intake is of the greatest importance, and we are sure Mr. Boyd's suggestion would prove an excellent solution in cases of pump starvation

due to inlet piping restriction or to an inadequate gravity head.

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The manager of a B-P Gas distributing plant in Oregon writes:

"We have not yet figured out just what is wrong with our installation in which we have taken the return line from a differential valve back to the liquid line ahead of the pump. It may be that we will have to take this clear back to the supply tank."

We assume that this reader refers to the by-pass line. Particularly in bottling service, and wherever there is any appreciable volume of fluid being by-passed, it is very important that this by-passed fluid be carried back to the tank. Otherwise, it becomes a means of increasing the temperature of the fluid in the pump, resulting in the formation of gas. This subject has been quite thoroughly covered in the September issue, and we urge that this system be followed.

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We have a communication from a Pennsylvania producer who describes his tank truck pump installation as one in which the pump takes its intake supply through a valve and dip-tube provided in the tank end. He states that he is unable to withdraw the last 20% of his tank capacity.

In our experience, the dip-tube type of tank construction has always been troublesome when used to supply a pump intake line. In practically every case examined, it appears that in the construction of this type of tank outlet, the diameter of the dip-tube has been reduced often to as little as half that of the exterior piping.

This has proven a serious restriction to pump intake supply, and it is an item of construction which it is very difficult to correct after once the tank is finished and put into use. For this reason, we suggest that the outlet for a pump connection be at the bottom of the tank, and advise that it be very ample in size for delivery needed.

In the particular case of this correspondent who is unable to withdraw the last 20% from his tank, it is our opinion that his trouble may not be due to restriction alone, since such a restriction would merely tend to reduce the discharge capacity. We think the trouble is more probably due to an incomplete weld of the dip-tube to the tank outlet fitting. We are making this guess because we have previously known of one other such case which was extremely difficult to analyze. We are illustrating this case in the accompanying sketch (Fig. 1) because wherever this type of design is followed, it is very important that some form of test be given these welded joints before final assembly is made within the tank or spherical container.

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Another reader has written as follows:

"Recently we installed a 100 GPM pump for unloading our transport. This is equipped with a 5 HP motor. We have tried on several occasions to use this same pump for filling individual bottles and small tanks. The filling operation is slow unless we set up our by-pass pressure to a differential of over 60 lbs. When we do this we frequently burn out our fuses."

Trying to use a large transfer pump for the filling of single bot

tles or tanks with the small fittings usually provided would not be good economy for several reasons which we will point out. In the first place, a transfer pump would seldom be required to pump against a pressure differential in excess of 25 lbs. This pump is amply powered with a 5 HP motor for delivering 100 GPM against this pressure. However, when it becomes necessary to develop two to three times this pressure, use a larger meter.

Also, the need for raising the differential to 60 lbs. or more merely to be able to fill an occasional single cylinder means that the pump must then handle its entire capacity to this pressure, with perhaps 10 GPM going into the cylinder and the other 90 GPM being by-passed.

It also becomes apparent that this pump must be operated not only against this higher pressure, but for a period 10 times as long per gallon of used output as it would in transfer service.

In such cases where it is possible, we advise that the customer use his transfer pump solely for the large capacity low pressure service, and that a separate small capacity pump be installed capable of handling a limited output to the necessary high differentials for bottling. This system also makes it possible to serve bottle customers at the same time the transfer pump is in operation.

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A dealer in California writes:

"We have found it very difficult to completely empty our tank truck when delivering into our storage tank. We balance the pressures between the two tanks with a vapor line, and can empty two-thirds of our 1,000 gallon truck tank in about 30 minutes, but it sometimes takes an hour more to finish the job."

On further investigation of this case we found that this operator was using 50 feet of ½ in. hose line for his vapor balance connection. Placing gages on both ends of the line, we found a back differential in excess of 10 lbs. when he started the pumping operation, even though the vapor hose line had been connected for over five minutes prior to this. He was using a 50 GPM pump, and within 20 minutes, the vapor pressure in the storage tank into which he was pumping had risen to nearly 60 lbs. in excess of that shown in his tank truck. Obviously from that point on pumping would be slow.

Here is a case of intended pressure balance which actually proved of no value because the connection was definitely inadequate. We did not investigate whether the ½ in. hose was completely closed by a defective lining, as well it might have been, but did find that the substitution of a shorter hose of 1 in. size quickly cured the trouble. We wish to here inject the suggestion that it is very important that pressure balance lines be of ample capacity because in effecting a balance, the differential pressures involved are so low that the transfer of the necessary volume of gas is not as rapid as might be desired or expected.

We also wish to recommend the more frequent use of test gages to make positive determination in cases like the above, as well as in almost every other troublesome analysis involving pressures.

# Making High Pressure Tanks For B-P Gas Industry

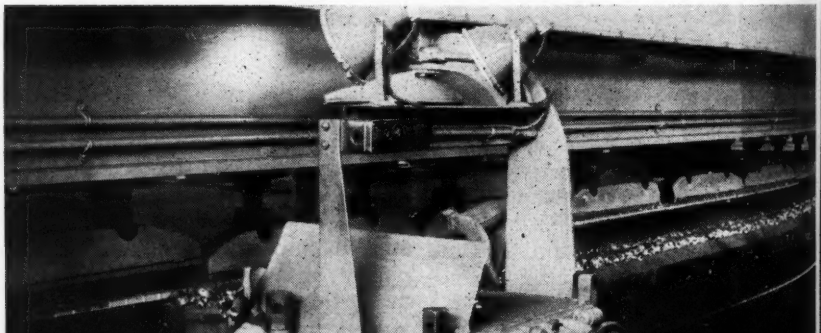
THE manufacture of high pressure tanks for the liquefied petroleum gas industry is a highly technical procedure.

No failure in the field can be countenanced and so there has been built up an exacting technique in construction and test methods that ensure both producer and user of a sound, perfect product.

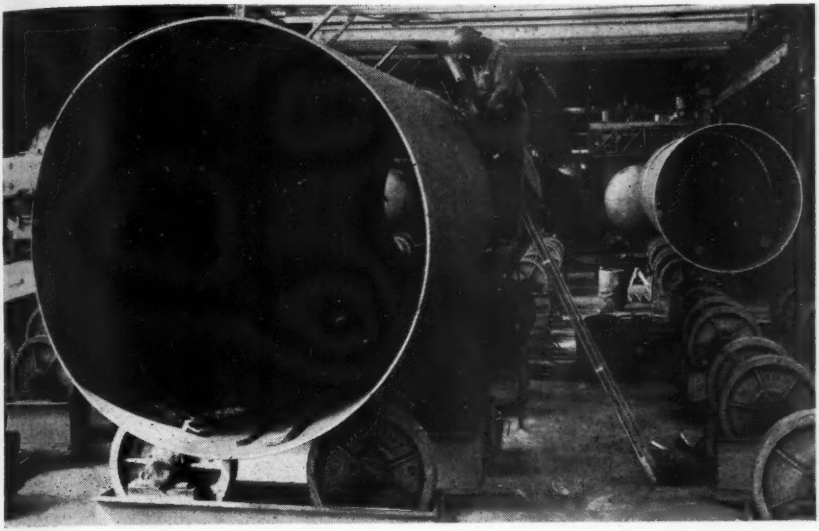
One among several manufacturers of storage tanks for butane and propane is the American Car and Foundry Co., with shops located in Milton, Pa. This firm, as its name suggests, also makes tank car tanks, many of which are used in transporting liquefied petroleum gases.

For high pressure tanks a complete welding technique has been developed, equipment for accurate and efficient preparation of plates has been built, clever jigs and handling equipment by which the tank parts are firmly held in place and properly positioned for welding have been developed, and highly skilled men have been trained.

This has been accomplished by establishing a comprehensive control of all the many details that enter into good welding practice.



**Fifteen cutting tools on each side of double-edge planer. It requires two 125 hp. motors to drive these tools.**



**Fitting parts of tank together in preparation for welding, called "fitting up".**

The most important single factor is the replacement of hand operations with automatically controlled machines.

A double-plate planer is the outstanding example of these accomplishments. In one operation, this machine cuts to width, trues the noses, and bevels the upper and lower edges of two parallel sides of the plate. There are 15 cutting tools on each side of this planer which make 3 different cuts at one pass on each edge of the plate. The planer is adjustable to cut plates from a minimum of 48 inches to a maximum of 163 inches in width and dimensions are controlled to the unbelievable maximum tolerance of 0.002 inch. The importance of this exact control of dimensions is evident in the "fitting up" and welding processes.

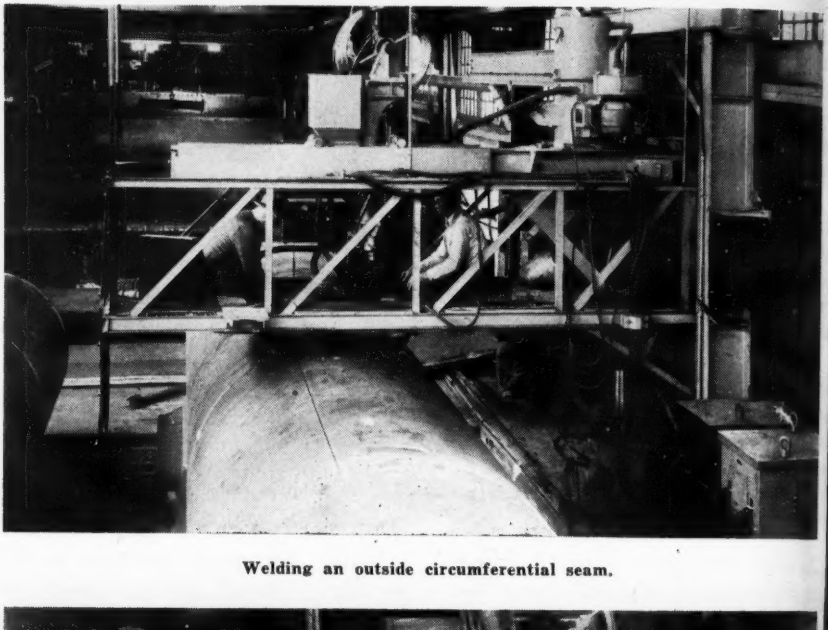
Plates for high-pressure tanks are then shaped into cylinders in drop end rolls. The tanks are formed from these cylinders.

Tank heads are formed of plates that are shaped by hot pressing or drawing in an 1100-ton hydraulic press. In this operation, the male section of the die pushes the plate through a ring die (female section). The plates are thus accurately shaped, dimensions are uniform, and the operation is performed with a minimum distortion of metal.

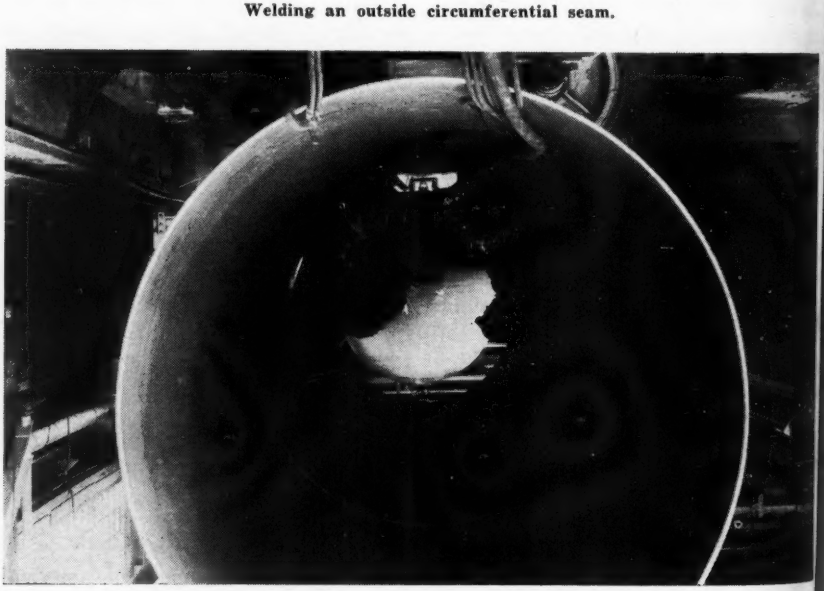
The flanged ends are cut with a gas torch to proper depth and the edges beveled by chipping. Here again, close control is of vital importance for the method of welding in use at this shop.

Prior to welding, the shaped pieces must be carefully fitted to-

# TANK WELDING OPERATIONS



**Welding an outside circumferential seam.**



**Welding the inside of a circumferential seam.**

gether. The noses of adjacent plates for each circumferential and longitudinal joint are butted to make an exact fit, by means of wire cables and take-up jacks. When plates are positioned, they are held firmly by welding several fitting bars on the exterior surface across each outside joint.

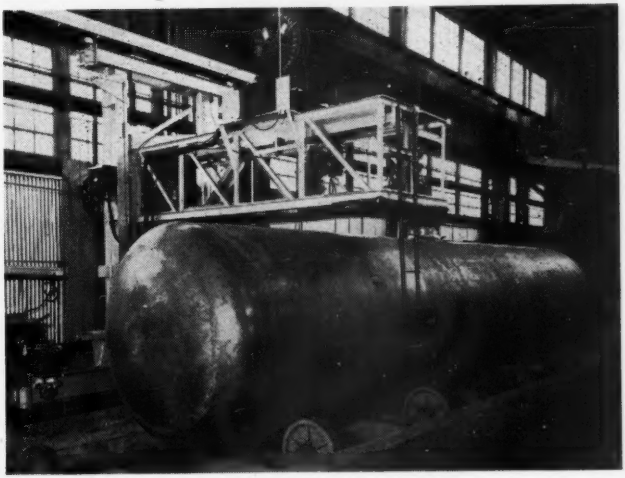
The importance of the edge preparations becomes evident in this operation. Plates which are not held to exact dimensions cannot be brought into contact along the entire length of the joint.

The "Unionmelt" submerged arc fusion welding system is used on all joints of the tank shell. This system automatically controls feed of welding wire, amount of flux fused, time or speed of welding, and degree of heat.

The interior welds are made with welding heads mounted on a carrier called a "monitor." This monitor travels along the joint at a constant speed, guided automatically by a wheel that travels in the groove. The operator adjusts the heat as required by the variations in the amount of weld metal which must be deposited due to the width of the V formed by the abutting plates. Circumferential welds are made by rotating the tank shell; the monitor traveling at the same speed in the opposite direction maintains a set position at the bottom of the shell.

Longitudinal seams are welded last, in order that all weld joints can be effectively overlapped.

In all critical welding operations, the heat is set to penetrate almost through the metal on both the inside and outside pass. There is, therefore, an overlap of the inside and outside welds. If the thickness of metal at the edges of the plate is not uniform, or if the noses of butting joints are not squarely against each other, the automatic control is replaced by the skill of the operator who must vary the heat of the weld



elding the end circumferential seam of a storage tank.

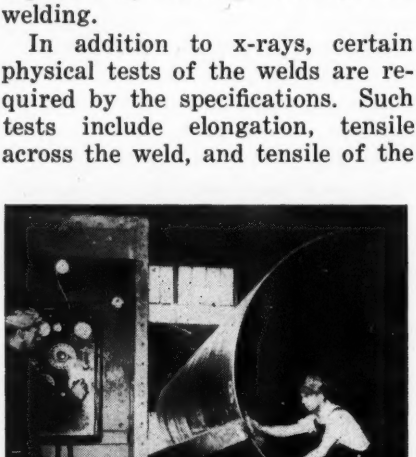
to maintain the desired penetration. This clearly illustrates the need for the accurate shaping of the edges which is so effectively accomplished by the double-plate planer. It also is evident that the "fitting up" or joining of the shaped plates must be carefully handled by highly skilled men.

The testing procedure used for proving welded tanks provides positive proof of their quality. For instance, every inch of the welded joints of tanks built to I.C.C. or A.S.M.E.-U68 specifications is x-rayed to detect welding defects. If any defects are discovered, such unsatisfactory welds are effectively repaired by cutting out and rewelding.

In addition to x-rays, certain physical tests of the welds are required by the specifications. Such tests include elongation, tensile across the weld, and tensile of the weld metal. These tests invariably show that the tensile strength and ductility of the weld metal are substantially above those of the parent metal.

Specifications prescribe that the completely fabricated tanks must be hammer-tested while under hydrostatic pressure in addition to the hydrostatic pressure tests.

According to employees of A.C.F. their welded tanks have never failed to pass these tests. The positive proof of satisfactory welds obtained through x-rays precludes any failures in these tests.



X-raying the welded seam.

## Government Program Set Up to Use German Industrial Secrets

Under the direction of the Petroleum Administration for War, the Petroleum Industry War Council has instigated a program of research in German technical and chemical publications to determine the German manufacturing methods of hydrogenation, catalytic cracking, hydroforming, alkylation, polymerization and synthesis processes.

The results of this investigation of German scientific skill will be combined with American "know-how" to produce larger quantities and better qualities in civilian petroleum requirements.

This program is under the administration of the Joint Chiefs of Staff and the Foreign Economic Administration and more than 200 American technical experts have been drafted from universities and government agencies to aid in the unscrambling of German oil formulas and methods which the United States Government Technical Oil Mission sends from abroad to PAW in Washington in the form of microfilms.

# Commercial Cooking

## A Peek Into The Future Will Pave Way For Sales

By J. W. McNAIR

Vice President and General Manager, Standard Gas Equipment Corp., Baltimore

AN industry as important as the commercial cooking industry, with an annual production of six and one-half billion dollars of food products, deserves a long and searching look.

J. W. McNAIR

We may expect new ideas, new faces, and new products in the commercial cooking field. Many manufacturers, like ourselves, found with the war the necessity for changes in our methods, our ideas, and our thinking. Every manufacturer found new precision methods necessary. New skills were taught his employes. Comes the end of the war and industry finds itself with vastly increased and improved production facilities.

In order to put such facilities to useful purpose, new markets must be discovered and developed. New products must be manufactured. Some such developments are certain to affect the commercial cooking field.

What do restaurant owners want in the way of postwar equipment? The first consideration that seems to run through all surveys is good, practical, fundamental kitchen equipment, able to do the work for which it was designed and do that job day-in-and-day-out with the least amount of interruption.

Important, also, in their planning for the future is the ability to maintain clean and sanitary conditions in the equipment itself. They are not satisfied with equipment in its present form and will insist upon improvements that will facilitate cleaning.

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**• COMMERCIAL COOKING looms larger and larger for B-P Gas men as a field in which to successfully extend their operations. Many important facts dealers and salesmen should know to make intelligent approaches to restaurant men have been covered in C. C. Turner's articles in the August, 1944, to January, 1945, issues of BUTANE-PROPANE News.**

**Now, J. W. McNair, manager of the Standard Gas Equipment Corp., manufacturers of commercial ranges, gives the industry a broad view of what the future may hold and information dealers and manufacturers can capitalize upon when soliciting commercial accounts. His remarks, delivered before the Florida-Georgia Gas Meters Association at Daytona Beach, are too extended for full publication, but the accompanying abstract features many important points.—Editor.**

Outstanding throughout surveys is increasing insistence upon improved kitchen layout. They recognize that properly planned kitchens produce better food more quickly, more easily, and more economically; also, that more rapid seat turnover is accomplished where kitchen planning eliminates cross-traffic and confusion. Greater efficiency and smoother operation in the kitchen will result in lower production costs throughout the life of the restaurant. Here is a challenge and a warning to sales managers of gas companies.

### Kitchen Engineers Needed

Fuel and equipment will not be the only competition for the commercial load. Understanding the cooking needs of our customers, and the skillful selection and installation of specialized cooking equipment will play an increasingly important part in the holding of old customers and winning of new ones. There will be a greater future for qualified kitchen engineers. The success of postwar commercial sales organizations will in a large measure depend on the individual salesman's ability to render a more intelligent layout service than his competitors.

Great interest is displayed by restaurant owners in ventilation and air conditioning. Not only will the restaurants of tomorrow be air conditioned, but the kitchens will be air conditioned as well; and whether we as gas men want to or not, we are going to be in the kitchen ventilating business in a big way, if we hope to maintain the high degree of acceptance gas equipment now enjoys.

Throughout the surveys, great emphasis is laid upon the need for better heat control, improved hoods, improved insulation, and improved heat retention qualities. Some of these demands can be met in designing equipment. Many must be met by better installation practice.

One large restaurant operator in Chicago would like to see vegetable, meat, and stew, steam pressure cookers with time clocks to keep the desired pressure and blow a whistle at the end of a pre-determined cooking time. In this way food could be placed in the steamer, the gas (we hope) or other fire set, the time clock set and the food forgotten until the whistle blows.

### Steam Boiler May Come

There is a growing demand for the steam cooker in small sizes to cook to individual order. This may, as time goes on, alter the whole top stove method of cooking vegetables. In line with this idea, a much needed piece of equipment, according to these restaurant men, is a steam boiler, compact and easily operated, to be used in the smaller kitchens for sterilizing, operating steam tables, steam kettles and steam cookers.

Considerable demand is developing among advanced thinkers of this type for perfect, uniform, accurate, day-after-day results on the cook tops as well as in the ovens. Toward this end such suggestions as the following come from a restaurant operator: "If the automa-

YMCA cafeteria in Hot Springs, Ark., where a Vulcan range is on duty.

bile manufacturers years ago put air cleaners in the cars to keep out dirt, why can't they be built into ranges so that the mixture of air and gas is kept constant?"

A perfect prediction of the coming of the filter on all ranges of the future, and a perfect background for the 100% primary air burner or pre-mix burner which the industry is now developing for the immediate future. We should not lose sight of that other burner, the 100% secondary air burner, which has some interesting possibilities in cooking applications.

Many improvements might be expected in the dishwashing department. One woman operator said: "I would like to have machines insulated to keep as much heat as possible from the kitchen. I would also like to have someone improve the dishwashing machine with an equipment that would rinse the dishes before they go into suds and provide the means for them to pass from the machine directly into a drying equipment. This has an interesting angle to you gas men. The first essential to proper dishwashing is an adequate supply of hot water of proper temperature. This has been a major problem in most restaurants.

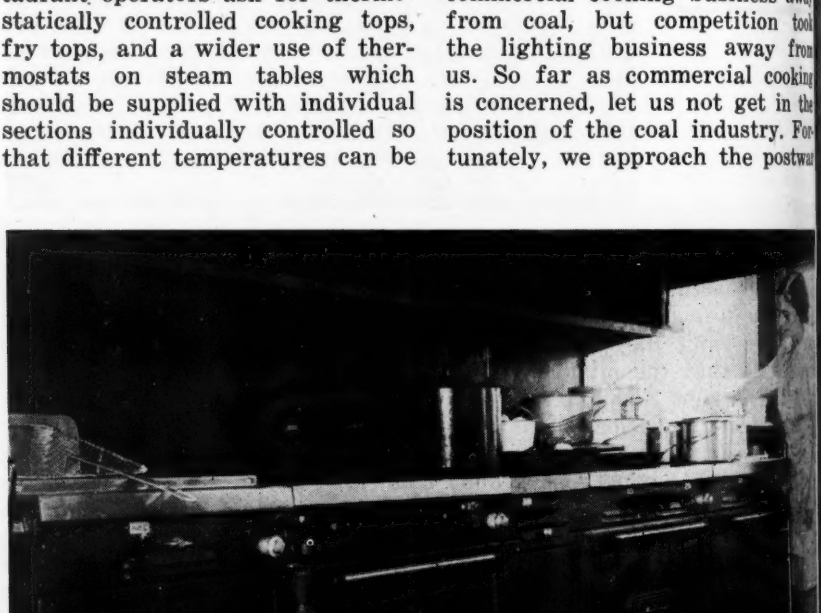
A nationally famous operator of a chain of restaurants specializing in fried chicken has this to say: "The best of equipment I have in mind is a fry station, complete with fry kettle, broiler, ovens, etc. This should have down draft vents installed beneath the floor with suction pulling the excess heat away

from the cook's face and body. The chrome shelves on this streamlined fry station should be insulated underneath so that no heat could be felt except where the heat units are actually in use and exposed."

Throughout the survey we find an increasing interest in wider use of thermostatic controls, and an improvement in the mechanical operation of these controls to meet the heavy demands put upon them in commercial kitchens. Many restaurant operators ask for thermostatically controlled cooking tops, fry tops, and a wider use of thermostats on steam tables which should be supplied with individual sections individually controlled so that different temperatures can be maintained for different foods.

It must be evident to all of us that we are in a world of change; that we cannot sit back and be self-satisfied with our business; that there are influences at work at all times, some favorable, some unfavorable. The favorable we must capitalize, and the unfavorable we must meet with intelligent and progressive thinking.

Most of us remember the coal and gaslight days. We took the commercial cooking business away from coal, but competition took the lighting business away from us. So far as commercial cooking is concerned, let us not get in the position of the coal industry. Fortunately, we approach the postwar



**A B-P Gas commercial range installation at the Knoxville, Md., railroad YMCA where flexible, fast and dependable service is vital. Coal was used before.**

market with our industry stronger than it has ever been in its history with technical ability, laboratory facilities, sales vision, and strength in its manufacturing division.

That brings us to the question, "What is the gas industry program to meet this situation?"

Comprehensive studies and recomendations have been made by the American Gas Association, the Pacific Gas Association, as well as by progressive gas men and manuturers.

### Many Improvements Planned

Manufacturers of equipment, as well as the American Gas Association are experimenting with flash tube lighting, electric ignition, improvements in pilots, and the use of filters between the manifold and the pilot, in order that the most complete, dependable, automatic service can be provided in the lighting of gas equipment.

Recommendations already call for the wider use of thermostatic controls on such equipment as fryplates and range tops.

Great emphasis is being given to new burners, and improvements in existing burners, including a 100% primary air burner and a 100% secondary air burner.

Much attention is being given to improvements in design to make equipment easier to clean, as well as to improve its appearance by use of light metals, smooth flush surfaces, and streamlining.

Engineers are at work on oven burners designed to permit temperatures of 250° in line with recent and current AGA research; also in the improvement in design of oven bottoms, racks, and improved door construction to secure easy opening, proper sealing, and increased insulation. Tests are constantly being made to improve insulation, reduce surface temperatures, improve heat distribution.

This not only covers the range oven, but roasting and baking ovens as well. Study is being given the installation of ranges and ovens in various combinations to meet specialized cooking needs. There is a happy balance that should always be kept in mind in the design of a kitchen and the application of specialized equipment.

### New Factor in Selling

The war has brought another competitive factor to bear on our business. Thousands of ships, submarines, landing craft, battleships, and airplanes are equipped with electric cooking equipment of the finest kind, and thousands of men will come back trained in the use of this equipment. Can we minimize the problem this brings before us? Many of these men will go into the restaurant business, and aggressive selling combined with good equipment will be necessary to sell them gas for their job.

Important developments can be looked for in postwar broilers. Among them are improved raising and lowering devices for easier operation. Easier cleaning throughout. Reduced surface temperatures. Automatic pilots and pilot filters with improved "ceramic burners" and better heat distribution.

Fryers, too, are receiving the

searching eye of engineers to develop more durable fryer pots, easier cleaning, better heat transfer and faster recovery. With improved types of gas burners, counter type models having attractive appearance, high capacity, light weight, and proper venting should soon be available.

The gas industry is alive to the responsibility and obligation it has to provide its customers with the right kind of equipment, service, and intelligent handling of their problems and future problems. We are all in this together, and will succeed only if we stick together, work together, and fight together to the attainment of a definite goal.

Every kitchen with obsolete equipment; every kitchen with modern equipment which the cooking crew is not using to the best advantage, is a potential invitation to competition. What the industry needs now is action. We know where we are going—we know how we are going to get there.

This story must be carried into every kitchen — to every factor in the commercial equipment field. Every kitchen of any importance should be canvassed. New and attractive plans of equipment layout should be presented, showing the use of specialized gas cooking equipment. Every encouragement and aid should be given kitchen operators to plan their postwar future around the use of modern gas equipment.

Wherever an appliance is used improperly, instruction in correct use should be given. We know how superior modern gas equipment is to any competitive equipment. Our job is to see that every commercial kitchen operator knows it, too.

The battle of selling in the postwar market will be severe. The best defense is a strong offense. The best plan to follow is to take action now and stop your competition before it gets started.

## AGA Laboratories Plan Annual Inspections Again

Manufacturers of gas appliances have been notified by the American Gas Association Testing Laboratories that annual inspections of approved appliances in production will be started soon.

According to R. M. Conner, Director, a number of inspections this year may be made somewhat later than usual in order to give time for the process of reconversion to peacetime appliance production. It is expected that several months will be required to carry out the entire annual inspection program.

Approval of appliances found in the field to comply fully with Laboratories' records will be renewed for the year 1946. The majority of inspections will be made from the Cleveland Laboratories and the remainder from the Pacific Coast branch. Ample advance notice will be given manufacturers so that mutually satisfactory arrangements can be made.

In addition to factory visits, inspections will be made in warehouses where appliances are stored, in department stores and on dealers' sales floors. Calls are also occasionally paid to consumers' homes for the purpose of checking not only individual appliances but their installation as well.

# No "Lemons" Leave Here

LABORATORY APPROVAL of design is by no means the last step in Rheem quality control. Careful manufacture by skilled craftsmen is part of the pattern. A final *performance* test completes the process.

The picture above typifies this last, tough hurdle. This man is hydrostatic-testing tanks for Rheem water heaters. Before galvanizing, water is put into each tank. Then the pressure is built up to a point far in excess of normal operating requirements. Only leak-proof, pressure-proof tanks get by here. And every burner assembly is subjected to equally rigid inspection.

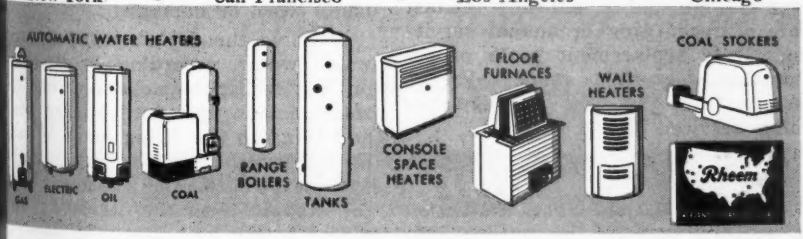
Every appliance turned out by the nine Rheem appliance plants must pass this "final exam." And every Rheem gas appliance carries the AGA Blue Star of Approval.

**In your plans for the future . . . include Rheem**

## RHEEM MANUFACTURING COMPANY

General Sales Offices

New York • San Francisco • Los Angeles • Chicago



# How To Check and Refill Fire Extinguishers

HAND fire extinguishers must be kept ready for instant use or they may fail to operate properly when needed. To maintain them in good working order, they must be inspected frequently, refilled immediately after use, and thoroughly serviced at least once a year. This is the advice of the Safety Research Institute, New York, and there is no better time to check extinguishers than during Fire Prevention Week, Oct. 7-13.

### Supervise Inexperienced Men

The annual servicing may be carried on throughout the year by a few experienced men, who also take care of recharging. If a large number of extinguishers is involved, the work can be done at one time by a group especially assigned to this duty. Inexperienced men should be supervised to assure correct treatment and reassembly of each extinguisher. In no case should so many extinguishers be removed for servicing at the same time as to leave any area without protection.

Soda acid and foam extinguishers must be recharged annually, if they have not been used and refilled in the meantime. Other types are recharged only after use. The tag attached to each extinguisher should show the last date of recharging or annual servicing. Only replacement parts or recharging materials made by the manufacturer of the extinguisher being serviced should be used.

The servicing procedure for each type is as follows:

**Vaporizing Liquid:** Test the action by pumping some of the contents into a clean, dry container, and return the discharged liquid. In the case of the pump-gun types, add more liquid, if necessary, to bring the level to within half an inch of the top. In servicing the stored pressure type, bring the liquid to the proper level and replenish the air pressure.

Never recharge a vaporizing liquid extinguisher with ordinary carbon tetrachloride or use water to test operation, as either will cause corrosion. Do not lubricate any part of the extinguisher.

**Soda Acid:** Be sure the nozzle opening is clear; then invert the extinguisher and discharge the contents. Unscrew the head and examine the gasket, which should be replaced if it is damaged or badly worn. Remove the cage containing the acid bottle, putting aside the stopple for later replacement. Make sure all the extinguisher parts are kept together so that they may later be returned to their respective units.

### Procedure to Follow

Rinse the extinguisher shell thoroughly with warm water, draining through the hose. Open clogged holes in the hose strainer with a piece of wire. Replace the hose and nozzle, if badly worn or damaged.

Dissolve the dry chemical in lukewarm water, according to directions on the recharge package. Pour the solution into the extinguisher shell and bring to the filling mark by adding water. Remove the cork from the new acid bottle and replace it with the stopple from the old bottle. Replace bottle and cage in the shell

# The HUMPHREY
## RADIANTFIRE CIRCULATOR

REMEMBER THIS — A HUMPHREY PRODUCT — MARK OF QUALITY

*An Outstanding Value in Beauty, Charm and Heating Efficiency*

GENERAL GAS LIGHT COMPANY KALAMAZOO, MICHIGAN

23 Warren St., New York City | 2nd Unit Santa Fe Bldg., Dallas | 225 Eleventh St., San Francisco

tinguisher neck. (If any acid spills on the skin or clothing, wash it off with water.) Rub a little vaseline on the shell threads and replace the head, using only hand power. Be sure that the gasket fits snugly against the shell neck.

CAUTION: If the extinguisher looks badly dented, or the seams appear weakened, do not discharge. Instead, remove the head and pour out the contents. Return to the manufacturer or his agent for repair.

**Foam:** As in the case of the soda acid, discharge by inverting. Remove the head and lift out the inner tank. Rinse the extinguisher thoroughly, draining water out through the hose. Dissolve the charging material according to instructions on the packages, using hot water for the A charge and lukewarm water for the B charge. Pour solution A into the inner cylinder and solution B into the outer tank, bringing both up to the filling marks by adding water. Replace the stopple on the inner tank and return it to the extinguisher shell. Replace the head, as for the soda acid.

**Loaded Stream and Gas Cartridge:** Since these types operate by gas released from a carbon dioxide cartridge, they should not be discharged for the annual servicing. Remove the head and gasket and inspect parts as outlined under the soda acid. Remove the cartridge and weigh on an accurate scale. A loss of half an ounce or more indicates leakage and a new cartridge should be inserted. If necessary, add water to bring the liquid in the tank up to the filling mark. Then replace the head.

**Carbon Dioxide:** Examine hose and horn for defects and see that the seal on the operating valve is intact. Weigh the unit. If there is a loss of weight, the extinguisher should be recharged. Recharging service is offered by the extinguisher manufacturer or his agents or by carbonic gas plants.

**Pump Tank:** Test by operating the pump several times, discharging the solution back into the extinguisher tank. A drop of thin lubricating oil may be placed on the piston rod packing. Bring up to the filling mark by adding water, if necessary.

## Synthetic Rubber Will Govern Tire Prices in Days Ahead

In spite of the problem of switching the rubber industry from wartime production to high level civilian tire manufacture, motorists may be able to get a chosen brand of tire by the end of 1946, according to the B. F. Goodrich Co.

It is stated that the next rubber problem would be that of a world surplus, though the immediate problem facing the tire industry is that of putting good tires on 30,000,000 passenger cars, trucks and buses and keeping pace with production of millions of civilian vehicles.

The present total synthetic rubber capacity is based on alcohol butadiene and the balance on petroleum butadiene (a gas obtained either from grain alcohol or from petroleum). It is believed that synthetic rubber will make a major contribution in keeping the prices of natural rubber from any large increase, once natural rubber production has been restored.

## National Butane of Alabama Leases New Building

Leasing of the building at 58 North Royal St., Mobile, Ala., to the National Butane Co. of Alabama was announced Sept. 2.

The company will be ready to occupy the building within the next 60 days.

# QUIZ — TESTING PROCEDURE

• *This department is a monthly feature to stimulate thought and to give operators basic industry facts. Clip out for your notebook or file in a standard, 3-ring, loose-leaf binder. Sources of information: The Bottled Gas Manual, Handbook Butane-Propane Gases.*

| Questions | Answers |
|---|---|
| **1** **Why is it necessary for an operator to test for leaks before turning on a system?** | All large cities have plumbing ordinances which require pressure test on all house piping before the utility can connect the meter and turn on the gas. The B-P Gas operator is working in areas where this inspection service is not available and often makes the house piping installation, himself, resulting in a contingent liability in case of an accident due to faulty installation. |
| **2** **What is a good method of testing house piping?** | A method used widely is to put a 25 lb. per sq. in. air test on the system and check for leaks. |
| **3** **How is this test accomplished?** | Air pressure can be put in the piping system before the regulator is connected by hooking up a tire pump equipped with a pressure gage and shut-off valve to the house connection. Pump air into the system until the gage reads 25 lbs. (Use a pressure gage with range from 0 to 30 lbs. per sq. in.) Close the valve and watch the gage. If the pressure stays steady for five minutes the test is satisfactory. |
| **4** **If pressure drops fast what is indicated?** | If pressure cannot be obtained or if it drops very fast it indicates a loose connection, uncapped line, or open appliance valve. This should be located and corrected. |

**5**

**If pressure drops slowly what is indicated?**

If pressure drops slowly the cause may be due to leaky threads or connections or leaky appliance valves. Leaks can be found by using soap suds on joints.

**6**

**After leaks have been found and corrected what should be done?**

Test should be repeated until the pressure holds steady as the correction of one leak may not insure that all have been located and corrected.

**7**

**After the gas has been turned on what other tests are necessary?**

After the gas has been turned on all lines should be purged of air and all appliances lighted and operated at full capacity. Appliances should be adjusted and a pressure test made at full load and at 0 load.

**8**

**How can a full load pressure test be made?**

A low pressure gage reading in inches of water should be attached by means of a rubber tube to a top burner on the stove. This can be done by removing the burner and slipping the hose over the gas orifice. A tight hose connection is necessary. The pressure should not be less than 10.45 ins. of water.

**9**

**If pressure is lower what should be done?**

The regulator at the tank should be adjusted to give at least 10.45 ins. of water at the burner with all appliances operating.

**10**

**What is final test?**

Shut off all appliances to determine lock-up pressure. Pressure should not be greater than 13 ins. of water. If the pressure is higher it is an indication that the regulator is not seating tight, the line sizes are too small for the load or the regulator is too small for the load. Before making any radical change it is well to repeat both the tests to check yourself and then locate the trouble by process of elimination by figuring line and regulator capacities and checking regulator for tight shut-off.

**SUBJECTS TO BE COVERED IN FORTHCOMING ISSUES:**

**● Testing for Leaks, Burner Adjustment ● Thermostats, Pilots and Pilot Controls ● Burner Design and Application ● Appliance Conversions.**

# Propane Furnaces Used For Flexible Heat Treating

DOWN in the state of Maine on the Kennebec river is a city of about 20,000 population in peace time, which, ever since anyone can remember, has been devoted to the building of fine ships. The people of Bath have always held this reputation, and the Bath Iron Works is known throughout the world for the making of fine destroyers for the United States government.

Fine destroyers require fine machinery, so it is but natural that around the famous ship building plant related industries should have come into existence.

An outgrowth of the famous ship building plant has been the Hyde Windlass Co. Originally devoted to the exclusive manufacture of windlasses, this phase of the business is now of minor importance. Electro-hydraulic steering gears such as are used upon our finest battleships and liners are now the company's principal product.

When you get into the building of special machinery it is an entirely different process from building machines on assembly line principles. There is much more drilling, grinding, and shaping to do than in the average manufacturing plant.

The labor and material involved in making a single tool which is to be used for one operation only, and may never be used again, often exceeds that which goes into the part, itself. Particular skill in the manufacture of tools is required; then, when those tools are properly shaped, they must be tempered for the work which is expected of them. Parts of certain machines require heat treating after they have been processed.

Chances cannot be taken when the lives of American seamen and the existence of their ships are at stake. Greater flexibility in heat processing methods is necessary in the Hyde Windlass plant than is required in a shop operating on a regular production basis. It is not, therefore, surprising to those who are acquainted with equipment of this nature that propane furnaces are to be found.

In addition to the conventional

By C. C. TURNER
Special Representative
Butane-Propane News

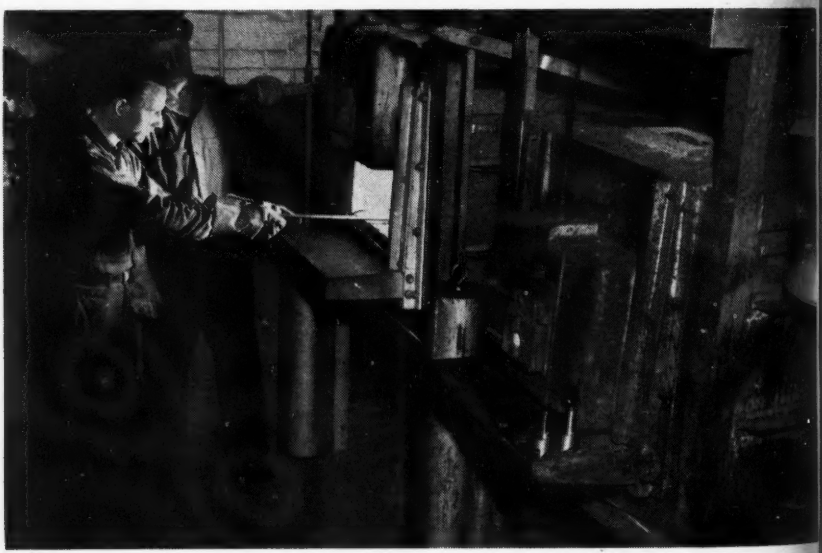
coal forge and power hammer to be found in the tool manufacturing end of such a business, there are two heavy furnaces manufactured by the Surface Combustion Corp. Temperatures of from 1650° to 2000° F. are attainable in the smaller of these furnaces, and about an hour's time is required to raise it to its maximum heat.

The larger furnace is used for operating temperatures of 2300° to 2400° F. and it requires about one and one-half hours to acquire the latter heat level. Both furnaces are automatically controlled by Brown electric pyrometers of the indicating type, and they are accurate to within five degrees.

Compressed air is brought to both furnace burners at about 1 pound pressure. Gas pressures are maintained at from 3 to 8 inches of water column, depending upon the purpose for which the furnaces are to be used. When both furnaces are operating at normal capacity gas consumption is about 400 pounds of propane gas in 24 hours.

Gas is supplied from two banks of cylinders, with 12 cylinders on each side of the system. The initial pressure reduction is through two Rego No. 2520 automatic control manifolds. From these gas is brought inside of the building at about 12 and 6 pounds, respectively. Connection of the two automatic control manifolds is in parallel, so that one will function if the other one should happen to give trouble.

Similarly, two Fisher No. 72 regulators are connected in parallel inside of the building, these



**Heat treating and tempering is one of the most important operations of Maine shipbuilding firm. Shown here is Arthur Youland, heat treating specialist, and helper, at one of the company's propane furnaces.**

Profit!

Let

Dutch Oven

"UP" Your Bottled Gas Sales!

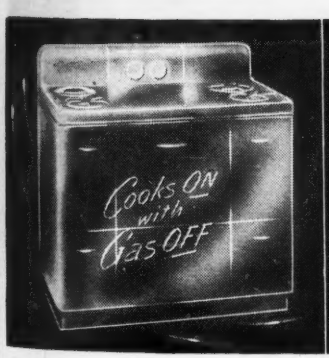
Investigate Dutch Oven TODAY!

THERE'S PROFIT galore waiting for you with a Dutch Oven Franchise, which is second to none in the entire industry.

Let Dutch Oven "up" your bottled gas sales by adding more bottled gas customers to your lists. You can save expensive long distance calls, for you won't have to go far afield to sell this new, Dutch Oven Gas Range that is scintillating with sales and quality appeal from its gleaming porcelain finish to the interior of its special retained heat oven.

Dutch Oven, the only range that automatically turns off the gas and keeps right on cooking, offers busy housewives the *unique* feature of not having to be at home when their dinner is cooking in the oven. Dutch Oven is bound to sell, and will "up" your bottled gas sales!

Awarded by the U. S. Maritime Commission For Meritorious War Production.




Only Dutch Oven automatically turns off the gas and keeps right on cooking

Dutch Oven

Gas Ranges

A. G. A. Approved for L. P. Gases

GLOBE AMERICAN CORPORATION

KOKOMO INDIANA

General Sales Office, 800 Field Bldg., 135 South LaSalle St., Chicago 3, Illinois

being provided with shut-off valves on each side of each regulator, so that one-half of the system can be operated under emergency conditions while repairs are being made to the other half.

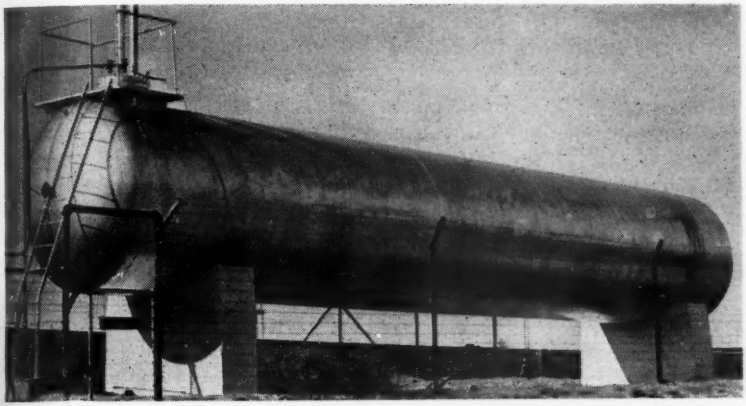
Arthur Youland, who has charge of the heat treating and who operates the furnaces, himself, is very warm in his praise of them. Coming from him, this praise should be gratifying to the gas industry, for he's the fellow that must produce tools and parts which will stand up, and if there is any failure in either he is the fellow who hears about it.

He keeps very accurate records of the various factors which enter into each type of heat application. He commented particularly on the absence of scale on heat treated parts and the evenness of heat distribution inside of the ovens. In the making of cutting tools these two objectives are essential.

Four hundred pounds of propane per day under conditions of continuous operation amounts to 146,000 pounds per year! I do not say that the Hyde Windlass Co. uses this amount of propane gas in a year, for they do not operate continuously on a 24-hour schedule,

**One of the machine shops of an Eastern shipbuilding company which uses propane in many operations.**

# LANCASTER points the way!



15,000 Gal. Propane Tank 8′ 0-1/16″ I.D. x 50′ 5-¼″ Long

## FOR LPG STORAGE

Lancaster stands prepared to help you equip your plant with adequate and economical storage facilities to meet the post-war demand for liquefied petroleum gas. Lancaster offers you the results of years of experience in design, fabrication and erection of complete bulk plants. This highly specialized knowledge is yours for the asking. You will be the winner in properly designed, trouble-free, durable LP-Gas storage.
Complete proposal drawings and estimates will be submitted to you gladly and without obligation. Send your inquiries today for prompt attention.

BULK TANKS

SKID TANKS

TRUCK TANKS

GAS PLANTS FOR MUNICIPALITIES

1000 Gal. Propane Truck Tank 48″ O.D. x 10′ Long

## LANCASTER IRON WORKS, INC.

LANCASTER, PENNA.

but let us be conservative and say that only an 8-hour production schedule was maintained for 300 working days of the year. This would amount to 40,000 pounds for the year, which is a comfortable load for any gas distributor, and much more than the total business of many operators in the B-P Gas business.

That it has been a Godsend to such discerning gas dealers as Norman Howard, of Bath, under the restrictions of wartime merchandising, goes without saying.

**Summer Visitors Constituted Load**

Maine is a recreational state, and many dealers have been compelled to build up their gas loads from the ranks of summer visitors who might under normal conditions use 200 pounds of gas, each, on the average, in a year.

Summer visitors in Maine have been conspicuous for their absence during recent years. The condition might have been catastrophic for many Maine dealers if they had not been forewarned of the desirability of a well balanced load such as is only obtainable through inclusion of commercial and industrial accounts together with those of a domestic nature. Here is a load equivalent to that which might be obtained from 200 summer visitors in the normal course of events.

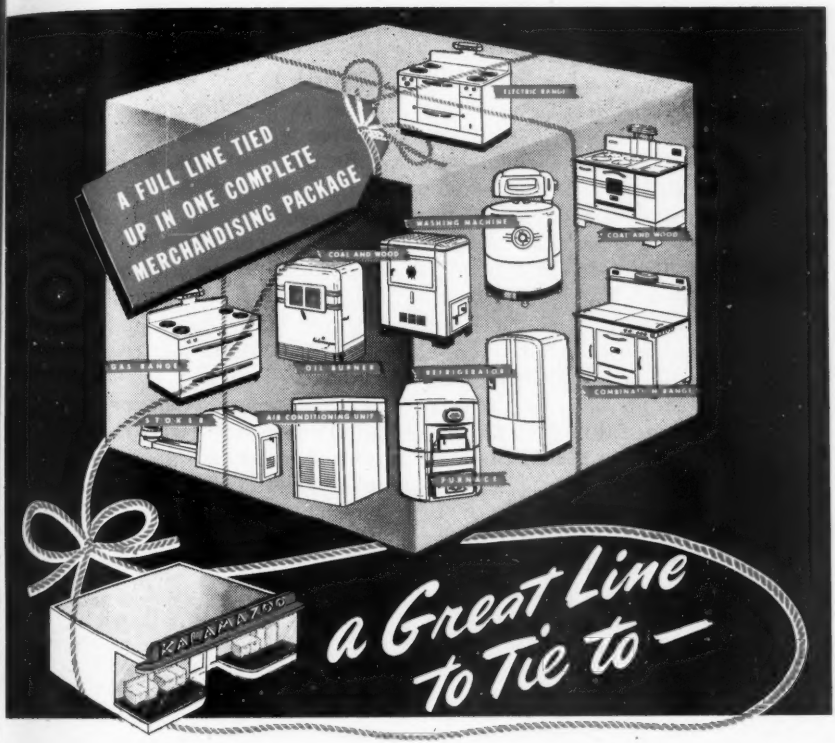
The training of Bath B-P Gas dealers has been a thorough one, thanks to an error in policy committed by the electric company serving the local area several years ago. The electric company thought to control the competition of the local, manufactured gas company by purchasing it, then decided to discontinue the operations of the gas company.

Of course, in order to discontinue this public service it was necessary for them to provide electric ranges without cost to those who would have them, or convert their existing gas appliances to B-P operation if they were confirmed adherents to the gas way of providing the common comforts of life.

There was just one trouble with the electric company's plan. A lot of Bath people didn't want to part with their gas appliances, so the electric company was compelled to pay for the conversion of their stoves, refrigerators, and water heaters to B-P Gas operation, and pay the installation charges.

**Harvest for Gas Dealers**

B-P distributors and dealers went to work in a big way. Special conversion crews and appliance salesmen were moved into the city by the gas distributors. Several of those customers who did change over to electricity later found that they didn't care for it as a cooking fuel. Only the best and most expensive ranges were sold to them by the dealers in order that liberal allowances could be made on the electric ranges. Then the B-P dealers added insult to injury by placing the traded-in electric ranges on their showroom floors with ridiculously low price tags upon them. Bath people were very practical in refusing to buy these second hand ranges when a new one could be obtained for nothing. People from other territories who wanted electric ranges went to Bath and pur-




# THE KALAMAZOO PROFIT-WISE FRANCHISE

**The Kalamazoo "package program"** contains more than a complete line of newly designed products.

**It includes business counsel** and dealer assistance that no manufacturer has ever been able to offer independent franchise dealers before.

**It's available** now for the first time because for 45 years Kalamazoo has sold only by mail and through factory-owned stores. Kalamazoo has had the closest, most intimate contact with consumers of any manufacturer in the stove and furnace industries.

**Now,** franchise dealers are offered a chance to take advantage of Kalamazoo's wide consumer sales "know how". Kalamazoo—with long experience in managing its own stores—knows where to stop loss leaks and keep you on the profit side.

**Greater values** through greater volume . . . Kalamazoo has poured $2,000,000 into re-tooling and streamlining its production line to give you a quality line with great profit and volume possibilities.

**For complete information,** write today to Sales Manager, Kalamazoo Stove and Furnace Company, 459 Rochester Avenue, Kalamazoo 6, Michigan.

KALAMAZOO
STOVES AND FURNACES
*Quality Leaders Since 1901*

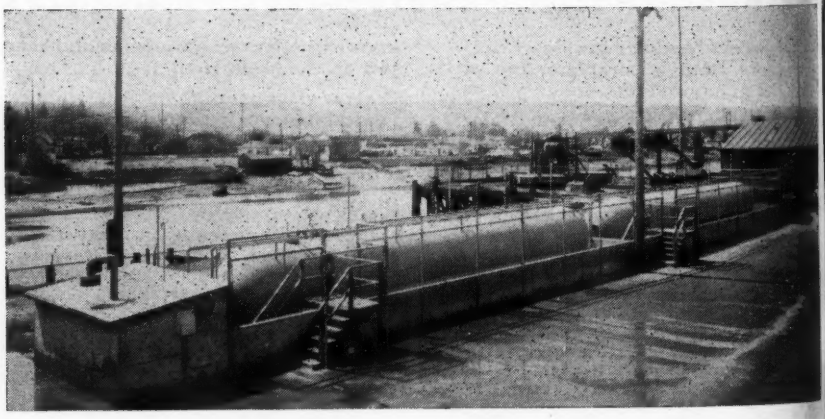
chased them at junk prices. Bath became very much gas-minded over night, and the electric company footed a substantial portion of the bill to make it so.

The commercial and industrial load? Well the engineers for the gas distributors who descended on the city like a crowd of locusts weren't satisfied with just picking off the cream of the domestic gas load. By training, they were men who had experience in commercial and industrial load building. They went after the hotels, the restaurants, cleaning establishments, bakeries, industrial plants and the local hospital.

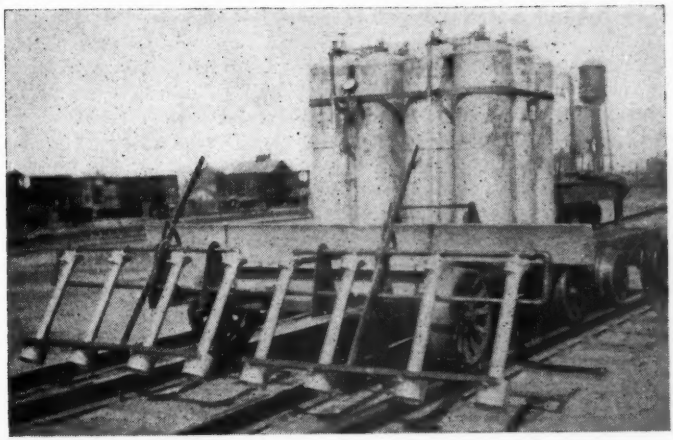
They did a thorough job of it. The modest load formerly enjoyed by Bath B-P Gas dealers jumped with astronomical progression. The plan of the electric company had definitely "back-fired!" It served as a warning throughout the nation to other electric companies who were tempted to act the part of a rich uncle in a community where gas service was available.

Better than this, however, Bath's gas dealers were made definitely commercially and industrially minded, a condition for which they had reason to be uncommonly grateful in the unbalanced condition through which have just passed the normal courses of trade in this country.

We hope not, but perhaps such conditions may return again in your day or mine. Perhaps some shift in the habits of people in your community may confront you with a similar problem, so why not take steps now to balance your gas load by going after the commercial and industrial applications which are available in your territory?



**Storage tanks for Boeing Plant No. 2, Seattle, where propane-air mix was used during war. Installation by Liquefied Gas Corp.**



# Railroad Weed Burner

Railroads faced with the burden of unprecedented traffic and skeleton maintenance crews will welcome the suggestion illustrated above. Make one pass over the right of way at 2 miles per hour—the terrific heat of the Butane-Propane Burner kills the weeds without injuring the ties. Then for a week let nature continue the drying, after which you make one more pass to burn the dried weeds clear. Complete information on suitable burners will be furnished on request.

**THE RANSOME COMPANY**

*Designing and Constructing Engineers*

4030 HOLLIS STREET — EMERYVILLE, CALIFORNIA

**Ransome**

# Metal Disc Burner For "Ideal" Range

IN March, 1943, the Women's Committee of the Pacific Coast Gas Association asked the women employes of member gas companies, except those directly engaged in sales and home service work, to describe the ideal gas range that they would like to possess, from the standpoints of appearance, performance, convenience, shape, arrangement of parts.

The accompanying summary is the composite answer and may present ideas to manufacturers of LP-Gas appliances which could properly be included in postwar plans.

Having studied the summary as shown in the table, the Gas Appliance Laboratory set out to see what could be done to approach this ideal, and recently exhibited the results, in the form of mock-ups and semi-working models, to manufacturer's representatives. Purpose of this activity was to stimulate interest, attempt to show what might be accomplished. Anything presented was in the nature of a suggestion and not a recommendation. The arrangement and general appearance of the top section is shown in Fig. 1, wherein a mock-up top surface has been applied to a contemporary range. The essential feature is the burner-grate assembly, which is actually a burner integral with and superimposed by a metal disc, which directly supports and imparts heat to the cooking vessel. This design lends itself to development of vertical venturi tubes, so that the disc, burner and mixing tube can be lifted bodily upward in one piece and cleaned and replaced with rela-

**TABLE 1—THE TOP SECTION OF THE POSTWAR GAS RANGE**

**Here is What Pacific Coast Gas Industry Women Want**

**Make It Easy to Clean**

1. With flat, smooth surfaces free from cracks, ridges, name plates, screwheads, etc.
2. All edges and corners, where horizontal and vertical surfaces meet to be continuous and curved with relatively large radius bends.
3. Grates or actual cooking surfaces as smooth and flat as possible, with burners completely protected from boil-overs and splatters.
4. Grates and burners that can be easily removed for easy cleaning.

**Satisfactory Appearance**

1. Elimination of top covers.

**Arrangement of Burner Grates or Actual Cooking Surfaces So That:**

1. A large pan or skillet centered on one grate will not overlap another.
2. Pan handles can be placed so as not to be heated by adjacent burner.
3. Satisfactory support is provided for all sizes of vessels from small cups to large skillets.
4. Adequate working space is available in addition to actual burner space.

**Even and Uniform Heat Distribution**

1. Across top of grate.
2. Along bottom of vessel.
3. Regardless of size of flame.
4. Regardless of size of vessel.

**Fig. 1. An arrangement of top section on a mocked-up top surface superimposed on a contemporary range.**

tive ease. This arrangement satisfies the "Easy to Clean" requirements.

To comply with the "Satisfactory Appearance" item, the top is smooth and white with the exception of the discs, which are black. If this contrast is not thought desirable, it would seem probable that postwar technology will provide a white material or coating that will withstand the necessary heat. In the mock-up (Fig. 1), the two left-hand discs are black and the two right-hand ones, white.

Fig. 1 also shows that the requirements of "Arrangement of Burner Grates" have been met, in that there is plenty of room and adequate support for cooking vessels of all sizes with handles out of heat zones; also there is considerable working space.

The "Heat Distribution" characteristics are excellent, from the smallest simmer flame to full burner output, as the metal disc "smooths out" the heat and enables even and uniform cooking at any temperature.

A requirement not mentioned by the contestants, that of thermal efficiency, is satisfactorily met by this disc grate assembly, when tested and compared with contemporary burners. Combustion is also satisfactory.

# Careful Driving Prevents Accidents

F. F. CAMPBELL

**IT IS AN INcreasing practice among progressive companies to hold safety meetings in their own organizations. The Philgas Division of the Phillips Petroleum Co. is one such company. It has a well planned program, one that can be, and should be, followed as closely as possible by all dealers and distributors.**

**This Philgas safety program has been made available to the LP-Gas industry through F. F. Campbell, manager of the retail division, and will appear, chapter by chapter, in BUTANE-PROPANE *News*.—Editor.**

## CHAPTER 7

I. According to accident analyses recently released by the Interstate Commerce Commission only about 7% of all automotive accidents were due to mechanical failure. Human failure was responsible for the remaining 93%. Human failure accidents result from two outstanding causes:

1. Incorrect or unsafe driving attitude.
2. Lack of driving skill.

Under the incorrect or unsafe driving attitude we find such important considerations as:

Poor Discipline—
1. Disobedience of company rules.
2. Interference by others.
3. Horse-play.

Lack of Concentration—
1. Attention distracted.
2. Inattention.

Unsafe Practice—
1. Chance-taking.
2. Short cuts.
3. Haste.
4. Poor judgment.

Mentally Unfit—
1. Sluggish or fatigued (reactions).
2. Violent temper.
3. Excitability.

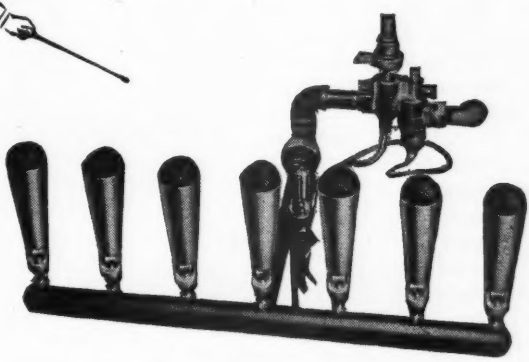
Physically Unfit—
1. Defective.
2. Fatigued.
3. Weak.

Lack of driving skill is evidenced by the driver's failure to recognize that he has no control over the unpredictable actions of other drivers and pedestrians nor over conditions of weather and roads. It is seen also in the driver's failure to look ahead far enough to recognize hazardous combinations of vehicles, streets, and pedestrians and then to avoid running into the middle of an impending accident situation from which, "once in the middle," it is usually too late to avoid an accident.

II. Considerations for the prevention of automotive accidents include:

# *This is it!...*

**the POSITIVELY NEW GAS BURNER**
**Designed, Patented and Manufactured by Empire Stove Company.**



## All Gas Men and Service Managers Will Hail These Features of the New Empire Burner.

- Correct proportion of primary air to gas automatically injected for highest efficiency in combustion. Never requires regulating.
- Gas cannot burn at orifice. Flash-backs entirely eliminated.
- Burner adjustments entirely unnecessary.
- No lighting or extinction noises.
- Inspiration sounds reduced to minimum, hardly detectable.
- No sooting or clogging under any conditions.
- Never requires cleaning.
- Field service nil.

**Used Exclusively in Empire's New Gas Floor Furnace, Gas Circulator Heater, Gas Forced Air Circulator and Closet Type Gas Furnace.**

***WRITE FOR INFORMATION***

*Empire Stove Company*

**BELLEVILLE, ILLINOIS**

MANUFACTURERS OF GAS HEATING AND COOKING APPLIANCES

A. Selection of the driver—

1. Physical qualifications.

Good eyesight so that one is fully aware of what is in front of him and to his right and left; also, that one can see at night under the more difficult night driving conditions.

2. A good heart so that there will be no heart failure and sudden collapse when behind the wheel.

3. Normal blood pressure so that there will be no dizzy spells or stroke and sudden loss of faculties when driving.

B. Mental Qualifications—

1. Character.
2. Appearance.
3. Courtesy in manners.
4. Speech.

C. Periodic check of present drivers to determine their physical qualifications.

III. Supervision of education in drivers:

A. It should be stressed that it is the personal responsibility of the driver to operate without accidents, and to be alert so that he is not caught at the last instance in a futile effort to avoid an accident. Neither icy roads, curves, hills, narrow roads, the absence of signs, signals out of order, nor carelessness, recklessness or ignorance on the part of others, relieves the driver of the slightest degree of his responsibility for safety. These are situations likely to be encountered at any time and he must drive accordingly.

B. Acquaintance with traffic rules and regulations pertinent to the state in which operations are carried out. Obtain copies and discuss items applicable to operation of vehicles. Supply each driver with copies.

C. General—

1. License.
2. Intoxicants.
3. Smoking.
4. Courtesy.

D. Care Of Equipment—

Inspect before going on highway:

a. Brakes—hand brakes.
b. Reflectors.
c. Rear view mirrors.
d. Horn.
e. Lights.
f. Windshield wipers.
g. Wheel and rim lugs.
h. Tire inflation.
i. Steering mechanism.
j. Flares.
k. If vehicle is equipped with a governor, see that governor is set at proper speed.

E. Operating Rules—

1. Subordinate rush to safety. It is not the intention of the company to insist that any schedule of business is so urgent that unnecessary chances must be taken.

2. Take time to be safe.

3. Don't pass on the right hand side of a vehicle unless proper clearance ahead and then only in emergency.

4. Never pass on the crest of a hill.

5. Never pass on a curve.

6. Never pass at an intersection.

7. Never cross the white line in the center of the road.

8. Never run abreast of another vehicle.

9. Use horn intelligently.

10. Use courtesy when another vehicle attempts to pass.

11. Avoid unnecessary conversation when driving.

12. Stop when buses, etc., are unloading passengers.

13. Observe school crossing, etc.

14. Don't stop on travel portion of the highway.

15. Never let your truck or car coast out of gear.

16. Use flares or reflectors when

DAY & NIGHT

# Leadership

## ...Your Key to Greater Postwar Sales as a DAY & NIGHT Dealer

During postwar years, as a DAY & NIGHT dealer in the Butane-Propane field, you will gain prestige, sales, profits and many other benefits of DAY & NIGHT leadership. For DAY & NIGHT leadership is based on strong buyer preference, wide-spread acceptance and demand, superior product performance, consistent advertising, and honest distribution during more than a third of a century. To become a DAY & NIGHT dealer, get in touch with your jobber now. If he does not handle DAY & NIGHT products, write us direct.

**LECTRO-GLO PORTABLE HEATERS**

All models A. G. A. approved for liquefied petroleum gases. Specially designed burners for Butane-Propane gases require no adjustment. Gives MORE effective warmth with LESS bottled gas in three ways: by radiated, reflected and circulated heat.

***America's Finest Today — Greatest Tomorrow***

WATER HEATERS • WALL HEATERS • PANELRAYS • CABINET HEATERS • PORTABLE HEATERS

**DAY & NIGHT MANUFACTURING CO.**

MONROVIA • CALIFORNIA

*One of the Dresser Industries*

vehicle breaks down.

17. Use headlights properly.

18. Operate vehicle in accordance with weather and road conditions so that the vehicle can be kept under safe control. If conditions are such that safe operations aren't possible, park properly and await until conditions clear up. If in doubt for proper procedure phone headquarters.

19. Don't stall engine while truck is in motion if a booster brake system is installed.

20. Always keep in mind these speeds and stopping distances:

Miles per hour 15. Stopping distance 12.5 ft.
Miles per hour 30. Stopping distance 50 ft.
Miles per hour 35. Stopping distance 68 ft.
Miles per hour 40. Stopping distance 89 ft.

21. Avoid sudden brake applications.

22. Do not follow other vehicles too closely. At 30 m.p.h. you should allow at least 100 feet between vehicles. As a general rule twice the stopping distance at any given speed should be maintained between vehicles.

23. Slow and complete stop at stop signs and all railroad crossings.

24. Parking on grades should only be done when absolutely necessary. If it is necessary, turn wheel to curb, apply hand brake, set gears in low or reverse, and use chock block.

25. Parking at customer's premises. Set hand brake, use chock block.

26. No riders.

27. Never demand the right of way.

28. Keep cab ventillated.

29. Use proper hand signals.

30. Keep to proper side of road when making turn.

31. Use tire chains whenever necessary.

32. Observe safe backing practices.

a. Plan your route to avoid backing wherever possible. When obliged to back, get out and walk around your truck to make certain there is nothing behind, then back immediately watching sharply.

b. If necessary to go back some distance, stop part way, then get out and check your safe progress. This is part of a job of backing safely.

c. Park where you will not have to back into a driveway from the street and so that you will not be obliged to back into the street.

d. If backing over a side walk and into a street, stop at the side walk to make certain that there is no little child playing behind or close by. Stop again at the curb to make a last check on traffic before backing into the street.

e. Don't depend upon your rear vision mirror entirely.

IV. What to do in case of an accident:

1. Take care of injured.

2. Call officer or policeman if there is none present.

3. Call office.

4. Get names of witnesses.

5. Get information required on accident forms, take measurements, fix in mind the position of all vehicles and take notes.

6. Do not discuss or sign any statements.

## A.P.I. Convention Slated For Early Next Spring

The next full-scale annual meeting of American Petroleum Institute will be held as soon as convenient, possibly early next spring, according to information obtained at the institute's headquarters in New York City. The first postwar convention is expected to be the "biggest yet," with an estimated attendance exceeding 4,000. There is said to be a growing sentiment in favor of holding all the annual conventions in the spring.

# WEDGEWOOD

## *now geared to full peacetime production*

## UTMOST ECONOMY *for those who use* LP GAS

*Complete with Oven Heat Control*

MODERNS PREFER GAS

**● GOOD NEWS to thousands of women who long to own a WEDGEWOOD, the gas range they know as the ultimate in Quality. And for users of LP Gas, the well-known economy of the WEDGEWOOD makes this famous high quality gas range doubly attractive.**

**WEDGEWOOD THE MODERN GAS RANGE**

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# CURRENT READING

**• Reviews of new books, pamphlets and articles published in recent magazines of interest to technicians and executives in the liquefied petroleum gas industry. Those interested in reading any complete article or book should write to the publications named.**

•

**Recommended Refinery Inspection Procedure is Prepared by P.A.W.** "National Petroleum News," July 4, 1945, pp. R-499-503. Recommendations for standard refinery inspection practice have been prepared by a group of oil company engineers under the auspices of the Petroleum Administrator for War and are now available to all refiners. The refinery inspection manual was originally prepared to give all the plants in the wartime program the benefit of the best experience and engineering knowledge within the refinery industry, to aid them in maintaining their plants at maximum efficiency in the production of essential wartime products. Consequently it covers instruments and other newer types of plant equipment, as well as the standard processing equipment. In this issue the first installment of the manual, on processing equipment, is given.

**Occurrence of Vapor Lock as Related to the Temperature—V-L Characteristics of Motor Gasolines**—E. W. Aldrich, E. M. Barber and A. E. Robertson. "S.A.E. Journal," July, 1945, pp. 392-401, 436. Reported in this article are the methods of applying the temperature—V.L. relationships to the analysis of data resulting from actual vapor-lock tests. Particular consideration is given: 1. To evaluating a fuel system in terms of the fuel of highest volatility on which it will operate under specified conditions; 2. To establish a satisfactory specification for fuels having distillation and vapor-pressure characteristics different from the fuels employed in the vapor-lock tests; 3. To determining what conclusions can be derived from different items of test data.

**Explosions—Their Anatomy and Destructiveness,** by O. S. Robinson. Published by McGraw-Hill Book Co., 1944. This book describes the sequence of events that lead up to an explosion, the phenomena produced, and the effects of these phenomena on the surroundings.

**Piping Arrangements for Acceptable Flowmeter Accuracy** — R. E. Sprenkle. Transactions, A.S.M.E., July, 1945, pp. 345-360. The author correlates data previously published on metering fluid flow through pipe lines and analyzes the requirements for piping arrangements, according to interpretation developed from many actual field installations. Most of the recommendations given in the literature are based on standards of piping requirements established by the Joint A.G.A.-A.S.M.E Committee on Orifice Coefficients. These standards as well as others obtained since that report was published in 1935 are shown in this paper in the form of seven schedules covering the use of "Orifices and Flow Nozzles," and an eighth schedule, applying to "Ven-

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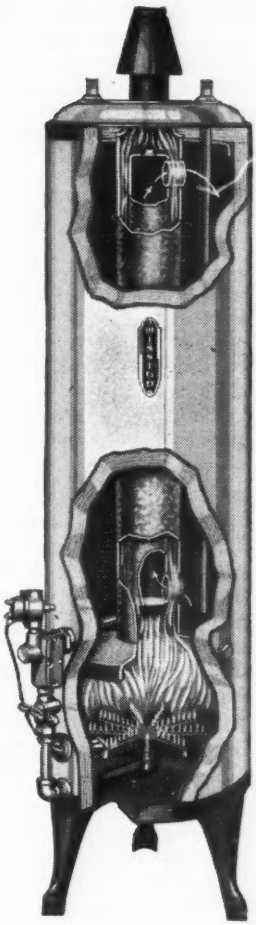

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turi Tubes" only. These schedules serve as the basis for developing typical piping layouts which are designed to interpret and clarify the principles involved from a practical application standpoint.

**Physical Properties of Light Hydrocarbons**—M. L. Smith and G. H. Hanson. "Oil and Gas Journal", July 14, 1945, pp. 119, 121. The table of physical properties of light hydrocarbons is concerned only with the light hydrocarbons. A more detailed presentation of their physical properties is made than is given in other compilations. In addition, an attempt has been made to incorporate the most recent values of these physical properties.

**Casinghead Gas Accounting**—K. R. Tibbets. "Oil Weekly," July 23, 1945, pp. 43-45. In the earlier days of the industry the only value of casinghead gas was the gasoline content value. Contrast this with the present day, when usually the value of casinghead gas consists of two other values in addition to the gasoline content value; namely, by-products or butane-propane value and residue value. Along this line it would be reasonable to say that these two additional values have approximately tripled the work in gas accounting. A typical procedure of gas accounting by a major operator in the Mid-Continent area is given in this article.

**Table of Common Hazardous Materials.** "Chemistry and Engineering News," July 25, 1945, pp. 1248-1256. This table, prepared by the N.F.P.A. committee on hazardous chemicals and explosives in cooperation with the American Chemical Society, was originally presented and tentatively adopted in 1928. In its present form it is subject to addition and revision but is presented as the most authoritative information to date. The purpose in listing a substance is not to discourage its proper use, but to make available information relative to its hazardous properties and fire-fighting phases in order to promote and improve methods of fire protection and prevention.

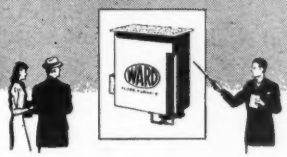
**Natural Gas Reserves**—E. DeGolyer "Gas," July, 1945, pp. 19, 20. Adequate price and market can best protest the 200 trillion cu. ft. reservoir.

**Foaming a Factor in Absorber Design**—H. C. Schutt. "Petroleum Refiner," July, 1945, pp. 93-97. The purpose of this article is to bring forward a chemical-engineering-design problem which, although generally recognized as such, has not been subjected to an exhaustive experimental investigation and scientific analysis for the purpose of evolving a useful criterion for the guidance of chemical engineers in designing absorbers and fractionators. The problem concerns the handling of liquids susceptible to foaming in conventional absorption or fractionation equipment. Data are presented showing the foam-forming tendency of various gasoils which may be used as absorption media, and the effect of the foam layer upon the performance of an absorber. Suggestions are made for a systematic investigation of the subject to develop a design criterion to be applied in the rating and design of absorbers and fractionators.

**Using the Velocity Head Concept in Pressure Drop Calculations**—C. D. Lapple. "Heating, Piping and Air Conditioning," June, 1945, pp. 313-324. Part 3 and last.

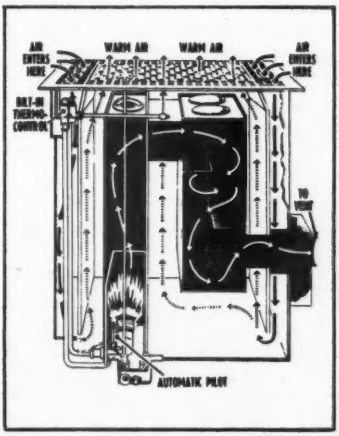
FLOOR FURNACE FACTS . . . NO. 2

# HOW THE WARD FLOOR FURNACE WORKS




The Ward Floor Furnace employs the principle of natural air circulation. Cold air, naturally seeking the floor level, is drawn down through the cold air chamber to the bottom of the furnace where it is then directed around the warmed walls of the sealed combustion chamber. The air thus contacts every square inch of heating surface and is released into the room again in steady, constantly circulating volume. All the air of the room is drawn through the furnace from 3 to 6 times an hour. The burner is in a sealed chamber and the products of combustion are carried through the vent to the out-of-doors.

The Ward principle of heating has been proved for over a third of a century by over a third of a million users.

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## Casualty Co. of Texas Butane Dealers to Be Separate Group

As reported in the September issue of BUTANE-PROPANE *News*, meetings have been under way to organize a casualty insurance company to write butane risks for Texas dealers.

Wm. J. Lawson, executive secretary of The Texas Butane Dealers Assn., raised a total of $40,700 in a series of 13 meetings held throughout the state between July 25 and Aug. 2 and $20,000 in addition was raised at an Aug. 6 meeting of the dealers in Dallas. The sum of $60,000 is still to be raised to complete the necessary $120,000 underwriters fund.

At the Dallas meeting it was decided by the dealers that the further responsibility of the company's organization and operation would be that of a separate company.

A temporary executive committee of seven has been set up to serve as a policy-making group until such time as the underwriting is completed and subscribers can elect their own executive committee members.

Members of this committee are Chairman L. D. Lowry, Jr., Mount Vernon; H. C. Pittman, Tyler; W. Don Maxwell, Odessa; Elmer L. Atkins, Arlington; C. H. Lacey, W. H. Russey, Dallas and Gus J. Moore, Austin.

## Florida Radio and Appliance Opens New Jacksonville Plant

It has been announced by Geo. H. Gray, vice president of the Florida Radio and Appliance Corp., Miami, Fla., that their new warehouse at 2320 Liberty St., Jacksonville, Fla. has been formally opened.

Mr. Gray says that this warehouse is one of the most modern in Florida, being equipped with inside loading docks for trucks, sidings for rail transportation, and modern offices and display rooms.

While headquarters for the Florida Radio and Appliance Corp. are at N. W. 5th St. and 1st Ave., in Miami, their operations in Tampa and Jacksonville are complete and the territories are handled by division managers.

**Offices, display room and warehouse of Florida Radio and Appliance Corp.**

# Butane Excels For Stop-and-Go Driving

**LIQUEFIED PETROLEUM GAS is today recognized by everyone acquainted with it as a superior type of motor fuel, capable of producing power at greatly reduced costs and adding markedly to the life of the engine.**

**In coming months BUTANE-PROPANE *News* will present "Case Histories" of truck fleets that have been operating on butane or propane. It will be the desire of the publishers to present facts and figures helpful to those wanting to learn more about this modern motor fuel. Questions or suggestions from the readers will be appreciated and will help in the presentation of this series.—Editor.**

By PAUL LADY

## Case History No. 4

**Company:** Carnation Co., 1639 N. Main St., Los Angeles. Marketers and distributors of fresh dairy products.

**Fleet History:** The first installation was made in 1939 on a number of Ford V-8 retail milk trucks. Since that time butane has been put on 210 trucks, wholesale and retail. These trucks are used six days out of the week for distribution of dairy products. The distances they travel vary but the average run is about 30 miles each day. Most of the trucks operate on a continuous stop-and-go schedule in their door-to-door delivery.

Of the original group converted, about 80 were changed back to gasoline when the war started. This was forced on the company by its inability to obtain equipment and fuel for a fueling depot at one of its substations, located in a distant part of the city. This change-back helped definitely to convince the management of the desirability of operating the fleet on butane. The present policy calls for all new trucks to be converted to butane operation. In time, the entire fleet will operate on butane.

The man who started the Carnation

**A view of the 1½-ton Ford and Chevrolet butane-converted trucks operating out of the Los Angeles plant of the Carnation Co.**

W. J. Thompson, fleet superintendent for the Carnation Co., beside one of the new 1½-ton Ford trucks being used for wholesale milk distribution.

Co. on butane conversion is W. J. Thompson, transportation superintendent. It was he who ordered the first conversion and he has watched its operation carefully ever since. Today, Mr. Thompson says that he considers butane an outstanding fuel and that it has proven most satisfactory for fleet use, particularly so for stop-and-go driving as found in milk delivery.

**Equipment:** At the present time 125 trucks are on butane. This includes small, retail delivery trucks, Fords and Chevrolets; 1½ ton wholesale delivery trucks, Fords and Chevrolets, each with gross weight of 16,000 lbs.; Mack and White semi-tractors for pulling of refrigerated van trailers, each with gross weight of 68,000 lbs.

**Carburetion Equipment:** Includes equipment manufactured by Roadmaster, American Liquid Gas and Ensign.

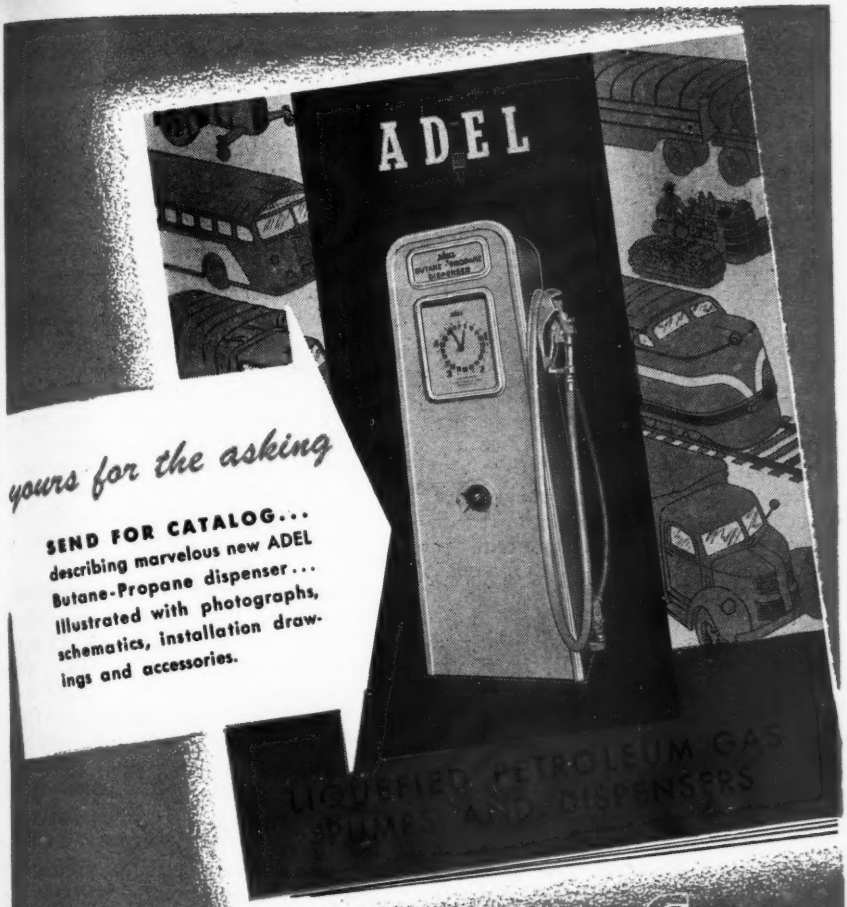
**Conversion Facts:** The average conversion takes two men one day. It costs between $150 and $200, depending on type of equipment used, size of tank, etc. It is possible to do the job for this price because all conversion work is done at the company's main yard.

Tackometers are used only on the large tractors. This is to prevent lugging of motors. It is not considered necessary to put this equipment on the smaller trucks.

All manifolds are blocked off in order that the intake manifolds may be as cool as possible. This may be done by entirely blocking off the hot air passage between exhaust and intake manifolds. Such a practice is important as butane or propane gas performs better when cold. This allows for more expansion when fired.

Compression is raised about 1 point on all trucks. This is usually done through the use of high altitude heads specially purchased for the job.

On the small, retail delivery trucks the tanks (usually 24 gals.) are mounted in the compartment just back of the driver's seat. This places the tank close to the ceiling of the truck, which has proven most satisfactory. It is out of the way, easy to fill and simple to install. On the large fleet of 1½ ton, wholesale, delivery trucks, the tank is bracketed to the frame on left side of truck. In this position it

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is concealed by body skirt. There is a clearance of 15 in. between tank and road.

**Fuel Consumption:** Figures show that butane mileage is about the same as gasoline. Mileage is low on both fuels as most of the trucks work stop-and-go routes. The average mileage on both fuels is around 5½ miles to the gallon.

The cost of butane is but slightly more than one-half that of gasoline; thus, the fuel cost on the Carnation fleet is greatly reduced.

**Power:** Drivers report that power remains about the same on the small trucks. Power on the large semis is increased.

**Oil:** The report on oil proves most conclusively that butane operated engines can save the owner a great deal of money. The Carnation Co. keeps a close check on the condition of the oil in every vehicle in operation.

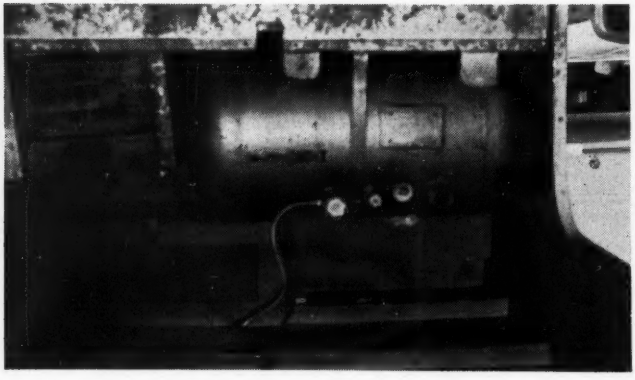
The services of an oil analysis company is employed at all times. Reports on the condition of the oil in use in each truck are submitted regularly. Oil is taken from the crankcase of each truck at the end of 1,000 miles of operation. This oil is analyzed in special laboratories by trained men. It is checked for dilution, metal content, sludge content, etc. A full report is then submitted to the Carnation Co. with suggestions as to when oil should be changed, type of oil to use, etc. These reports are watched closely and directions followed carefully.

Company policy calls for a change of oil every 8,000 miles, regardless of condition. It is found that many of the trucks operating on butane reach this mark before oil change is needed. The average change on butane motors is 4,500 to 5,000 miles. The average on gasoline is 1,500 to 2,000 miles.

Both gasoline and butane trucks are of similar make and age, travel similar distances over the same type of routes each day. According to company reports, oil taken from butane motors shows no appreciable dilution, minute metal content and continues to be clean throughout its life.

**Plant Facilities:** The Carnation Co. maintain their own butane filling station at their main Los Angeles plant. This consists of an island with all necessary equipment. A 6,000-gal. underground storage supplies the fuel. Also at the main plant is a complete garage where all installations are made and repair and maintenance is handled.

**Operating Facts:** After six years of



**Butane tanks, like this one, are mounted in compartments back of driver's seats in the light, retail sales trucks.**

experience with butane power, men in charge of truck operations at Carnation agree that butane is a most satisfactory fuel for fleet operation, particularly so on stop-and-go driving. It is acknowledged that in this type of work dilution of oil is especially great. Trucks doing this type of work have a relatively low operational life when running on gasoline. On butane, mileage is increased tremendously as motor wear is cut to a minimum.

Butane operation at Carnation has proven another important fact in connection with stop-and-go driving. On gasoline, the engine seldom gets hot enough for efficient operation. This contributes to speeding of the motor at each start and the consequent dilution of oil, and motor wear.

### Engine Starts Easily on Butane

When the engine operates on butane it starts immediately, even though it has been standing for some time. It is not necessary to warm up the motor for efficient operation.

For this same reason a marked difference has been noticed in the lifetime of clutches. Clutches in butane trucks give longer wear, according to shop records. This is attributed to the fact that drivers do not have to warm up, and consequently speed their motors, so much.

This tends towards smoother starting. Butane gives instant, steady carburetion from time motor starts; therefore, there is not the usual racing of motor and slipping of clutch so often found in the warming up period.

Seemingly insignificant, but most important in the operation of a large fleet, is the matter of the motor's choke. The gasoline engine calls for more-or-less continuous choking when the motor is cold. This increases dilution and adds to the consumption of fuel. In a fleet, such as Carnation's, where many inexperienced drivers are employed, this can be a most impor-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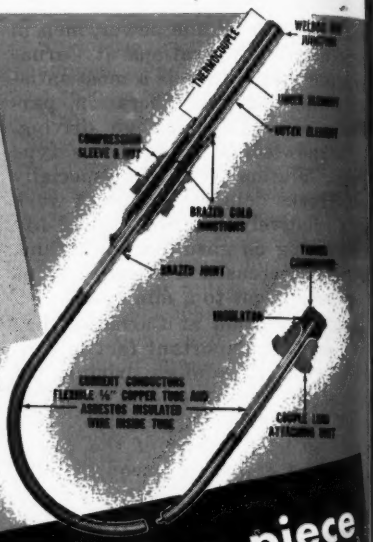
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The One-Piece Couple Lead, made of dead-soft copper tubing, is easily bent, coiled, or formed. Yet it is remarkably rigid, keeps its form, and after being shaped as desired, stays that way. Installation is simple and easy.

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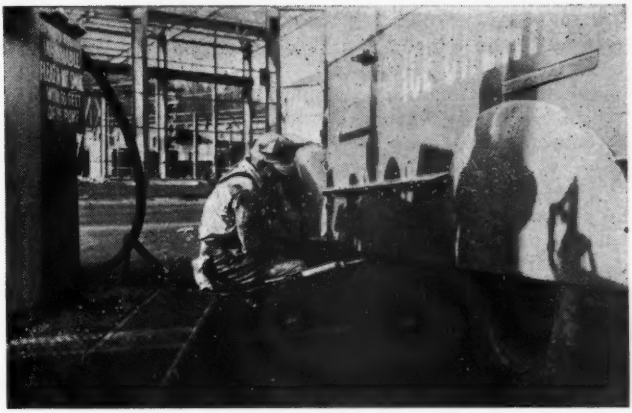

Filling butane tank on a 1½-ton wholesale delivery truck from the company's dispensing unit. Tank, bracketed on side of frame, is concealed by body skirt.

tant item. The butane engine does not require choking, as dry gas is present in the motor at all times.

Another interesting fact developing from the Carnation fleet operation is the saving realized through the elimination of cracked blocks. This has always been a common failure, due to a lack of caution on the part of drivers. In the operation of such a large fleet, many radiators run low on water. On gasoline operation the driv-


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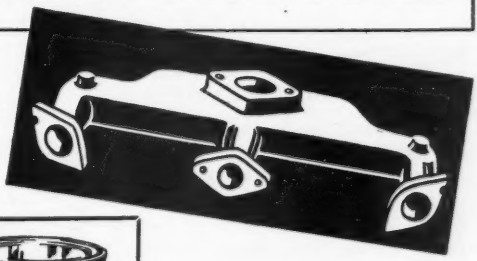

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ers run until the truck gets hot. When cold water is added a cracked block often results.

On butane operation it has been found when the water gets low, the circulation to the vaporizer stops, causing poor performance.

This, of course, brings the trouble to the driver's attention immediately and no damage is done.

Records at Carnation show that motor life is doubled, at least, when the engine is operating on butane. In many cases the butane engines last three times as long as those running on gasoline. In connection with this outstanding fact, Mr. Thompson believes that it would have been impossible during the war for his company to continue operation with the same number of trucks available if a large percentage of their trucks had not been running on butane.

This fact is augmented by the shop reports which show that trucks operating on butane run 45,000 to 50,000 miles before a major overhaul is necessary. Gasoline operated trucks call for an overhaul at 18,000 to 20,000 miles.

## High Compression Engines Best for Heavy Duty Work

Questions that some farmers may be asking about "high compression" in tractors are answered in a folder which has just been issued by the Ethyl Corp. Copies may be secured from farm implement dealers, fuel suppliers, or by writing to the Agricultural Div., Ethyl Corp., Chrysler Building, New York 17.

Basically, the booklet points out, a "low compression" and a "high compression" engine are quite similar. The only difference between the two is that in the high compression engine the fuel-air mixture, which is burned to produce power, is squeezed tighter in the cylinders before ignition.

High compression is simply a method of getting more power from a given-sized engine for each gallon of fuel consumed.

What high compression has done for automobiles, it is now doing for tractors. In fact, tractor engineers agree that one of the most important factors in present and future design is the high compression principle.

According to statements in this booklet it is not difficult to convert older tractors to high compression. The best time for this is at overhaul time.

The booklet gives the following procedure for making a power booster overhaul:

1. Replacing the pistons with high compression or so-called "high altitude" pistons; 2. installing "cold" (gasoline) spark plugs; 3. adjusting the heating control on the manifold; 4. adjusting the carbureter.

## Research Continues For Best Engine Fuels

General Motors research laboratories have always been engaged in research on internal combustion engine fuels from the standpoint of engine builders. The objective has been to find out what can be done about the chemistry of combustion of fuel in the engine to improve the power and efficiency of the combination, fuel-plus-engine. "The Effect of the Molecular Structure of Fuels on the Power and Efficiency of Internal Combustion Engines" is the title of a paper upon this subject prepared by C. F. Kettering for "Industrial and Engineering Chemistry."

Research early showed that limitations are imposed on fuel-plus-engine combination by the destructive combustion disturbance called "knock."

Although both fuel and engine are involved, the power and efficiency of any one design of engine are depend-

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ent upon the extent to which the fuel used is free from knock. The latter, in turn, is influenced by the addition of materials such as tetraethyllead to the fuel and, still more importantly, by even slight changes in the molecular structure of the fuel itself, or the way in which even the same number of atoms are linked together in space to form molecules.

Studies of molecular structure show that long, thin molecules knock badly and short, compact ones of same weight, only a little, and that the differences between them may amount to several fold changes in the potential power output of an engine using them.

In this research a compound called "triptane" (2, 2, 3-trimethylbutane) was found to be one of the best fuels. Recently 99% pure triptane has been made in tank car quantities. Sufficient quantities have been obtained in a new pilot plant to permit extensive testing, even in airplanes.

The gains possible with triptane, especially when tetraethyllead is added, depend upon the particular engine and conditions of operation, and have amounted to as much as four times the power and a quarter less fuel than is obtained with present 100-octane gasoline. The objective of this research is to find the best combination of engine and fuel to give the greatest output of useful work or power per total dollar, irrespective of what form the engine-fuel combination may take.

There is still a very large field for improvement, both in the fuels, themselves, and in the designing of engines to use such fuels to best advantage.

## B-P Gas Changeover Proves Economical

The experiences of Durwood Hutchison, of Mountain View, Calif., su-

**Durwood Hutchison beside the car he personally converted to B-P Gas.**

perintendent of Imperial Gas Co.'s Northern California division, provide an interesting illustration of the advantages of operating a motor on B-P Gas.

In 1940 Mr. Hutchison converted his Chevrolet to operate on butane. It ran from that time until August 1945, without removing the head or the pan, traveling during that time a distance of 85,000 miles.

When the car was checked by a Chevrolet agency it was found that compression on all cylinders was 120 pounds. This uniformity of compression was quite outstanding, according to the mechanics. The car still does not pump oil, wear on cylinders is negligible, and there seems to be little change in power from the original motor.

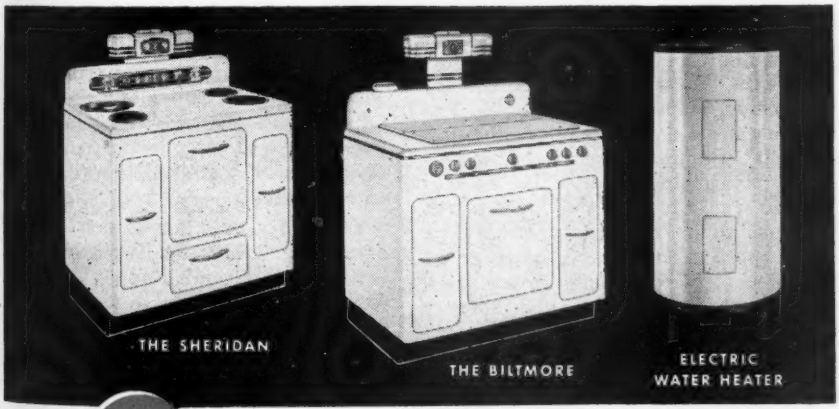
Mr. Hutchison used oil of No. 10 weight until 1944, when he began using No. 20 weight. He runs 4000 to 5000 miles without changing oil and no filter is used. His first new set of plugs was put in at 65,000 miles.

The installation was made by Mr. Hutchison, who stated that it was not a difficult operation and that he has had no trouble with the carburetion equipment since it was first put on.

# Key Note of an O-o-o-oh

That first, breath-taking sight of a modern L&H range incites an irresistible impulse to exhibit vocal admiration. And well that it should — for L&H ranges have *always* been something to sing about. What housewife wouldn't thrill with enthusiasm to the many improvements and innovations that make her daily cooking job easier, surer, and so much more satisfying with an L&H range! And this enthusiasm is not something new. Its been going on for a long time — through more than 70 memory-packed years of helping mother prepare those unforgettable meals that make her so famous.

The recognized prestige, which is a part of L&H cooking and heating appliances, grows steadily more secure as L&H continues its role of being constantly up-to-the-minute. Appliance merchants, seeking a fast-moving line having the stability of long, practical experience, can profitably look to L&H. Plans for future activity in the appliance field hum with tuneful rhythm when they're backed by the sound, aggressive merchandising that produces profit for you. Get the L&H story today. Write for it.




KEROGAS L&H ALCAZAR

**A. J. LINDEMANN & HOVERSON CO.**
MILWAUKEE 7, WISCONSIN

Manufacturers of ELECTRIC RANGES • ELECTRIC WATER HEATERS • GAS RANGES • OIL STOVES • PORTABLE OVENS • OIL HEATERS • WICKS

# TECHNICAL

## "Infra-Red" Paint Drying With Gas

By WILLIAM H. TESMER
Chief Engineer, Burdett Manufacturing Co., Chicago, Ill.

WITH "infra-red" heat processing playing so important a part in today's efforts toward both quantity and quality production, it seems only fitting that this subject should be carefully viewed from all angles.

This article deals directly with the operation and results obtained by the refractory type "infra-red" burners. This type "infra-red" burner, when employed with a recirculating system as in paint drying, will offer decided advantage such as 90% lower fuel cost, and will provide up to 300% increase in production, as compared with old methods of drying, without reformulation of paints.

In the case of ammunition chests and similar metal chests, the refractory type "infra-red" burner will dry the inside finish with equal speed and thoroughness as the outside, simultaneously. Similarly wrinkle, hammerloids, clear, black and white finishes can be run through side by side, in the use of refractory type burners, with perfect results requiring no change of speed or temperature.

With the refractory type burners the recirculation of hot air not only aids the speed of production, reducing fuel consumption at the same time, but provides a pure oven atmosphere continuously drawing out all foul air.

Summing up the most important advantages of the refractory type "infra-red" burner, it can be said that:

1. Fuel consumption is unbelievably low.

2. Reformulation of paints for use under this drying system is not necessary.

3. Size and shape of work being processed has no bearing on speed and results.

4. It is not necessary to focus burners on actual surface, which is a requirement in the use of lamps.

5. Pure oven atmosphere is always present.

6. Wide range of colors, finishes, shapes and sizes can be run through simultaneously with excellent results.

7. Temperature from 150° to 550° F. can be obtained by merely resetting temperature controllers, allowing a wide range of temperature and types of production without changing speed of conveyor.

The "infra-red" gas burner equipped oven (Fig. 1) of the Hayes Manufacturing Co., Grand Rapids, Mich., is chosen for discussion, because this installation is a conversion job and offers excellent testimonial. The Hayes oven has been operating for approximately two years, including Sundays and holidays, without requiring maintenance.

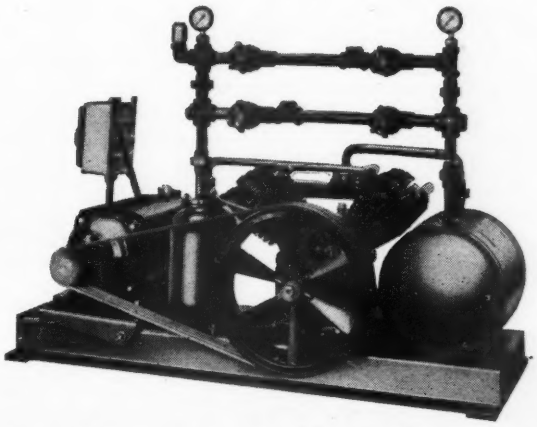
This oven, originally constructed to meet the specific requirements of

# TIME — SAVE — MONEY

## With A Roney Vapor Compressor

### VAPOR LOSS IS COSTLY

Every year thousands of gallons of butane and propane are lost in residual vapors left in tank cars and truck transport tanks at time of transfer. Only a Vapor Differential System delivers ALL THE GAS YOU BUY.



COMES IN 3 SIZES

**FAST—The Roney Vapor Differential Compressor delivers 30 to 150 gals. per min., depending on size of compressor. This rate can be maintained consistently. (There is no wear as in liquid pumping systems.)**

**SAFE—There is no pressure in hose and lines. No moving parts or rotating shaft stuffing boxes subject to liquid pressure.**

**ECONOMICAL—Recovery of residual vapor insures sufficient saving to pay big returns on investment. System performs more operations and eliminates wear found in liquid pumping system.**

**FLEXIBLE—The Roney Compressor is designed to meet the particular needs and problems of this industry. Units are so standardized that they will fit nearly all types of plant operation with a minimum of alteration to existing piping.**

**TESTED—Years of practical field operation, under all conditions, have gone into the engineering of this unit. Its many special features are the result of operation in numerous bulk plants throughout the country.**

**L. C. RONEY INC.**
1740-44 W. 59th ST. • LOS ANGELES, CALIF.

Hayes production, was indirect fired before conversion. It measured 180 ft. long and had a floor conveyor that traveled 24 in. per minute. The paints used under these conditions were formulated for a cycle of 1½ hours at 300° F.

Conversion of this oven to employ Burdett "infra-red principle" gas burners as shown in Fig. 2, cut 100 ft. from the length, making its overall length 80 ft., counting the 10 ft. vestibule air seal at each end. Two overhead monorail conveyors, traveling in opposite directions, were added, having a top speed of 10 ft. per minute and low speed of 8 ft. per minute. They are actually operating at 9 ft. per minute under normal conditions. The floor conveyor that is used for very heavy products, travels at 10 to 14 ft. per minute. This oven operates four manifolds, each 25 ft. long—two manifolds on each side of the oven occupying 50 ft. in length.

Greater flexibility, than found in this oven, is not possible. It will handle anything within the scope of the annual production of the Hayes plant from 150° F. to 450° F. Any temperature change, either up or down can be accomplished in 7 minutes, permitting a complete paint change within that period without stopping the line of production. Hayes has also found that they can run their wood parts with the same ease and excellent results as their steel and aluminum parts.

It will be noticed that the conveyor

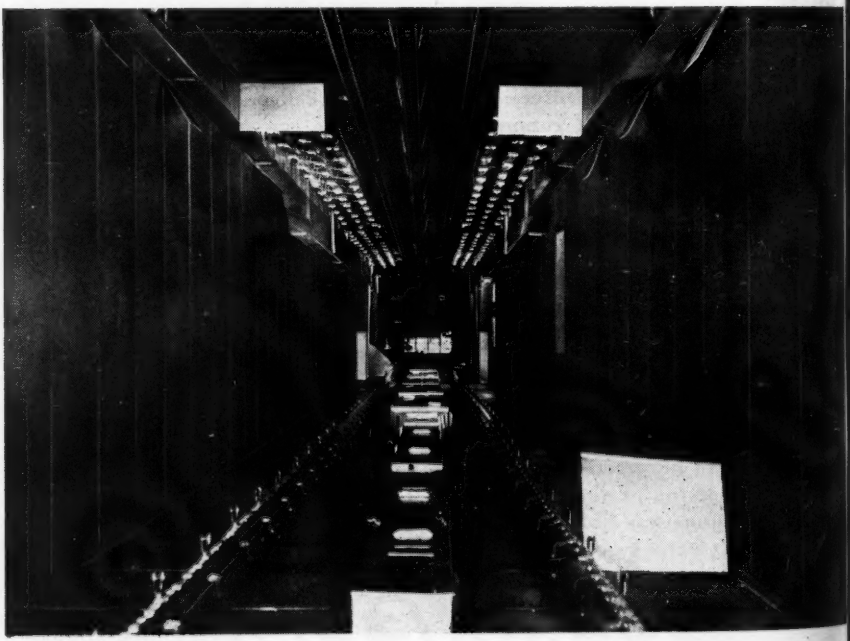


**FIG. 1. Infra-Red gas burner equipped oven at the Hayes Mfg. Co., Grand Rapids, Mich.**

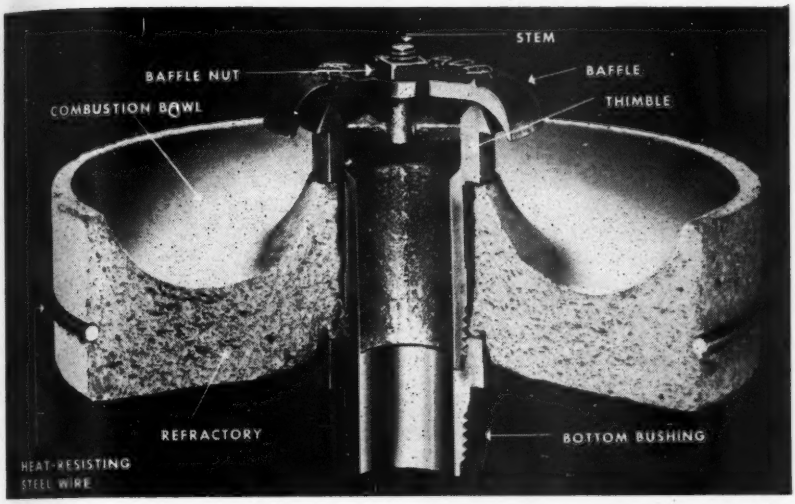



**FIG. 2. The Burdett "Infra-Red Principle" burner.**

**(1) These burn any commercially available gas from manufactured to hydrocarbon gas with as high as 40% economy in fuel consumption.**

**(2) No carbon deposits—no foul ovens—always a clean oven atmosphere.**

**(3) Production increased up to 300% in paint drying.**

**(4) Size and shape of pieces have no influence on uniformity of cure.**

**(5) All varieties of colors—white, green, red, purple, tan, etc., finished simultaneously without discoloration, loss of sheen or checking.**

**(6) Rough and polished surfaces, thick and thin materials, are all finished with equal success.**

**(7) Single-line or grouped piece production handled with equal success without adjustment of equipment.**

**(8) In food processing—better retention of food values and flavors, and little or no shrinkage.**

speed will not permit the cure cycle to be longer than 6¼ minutes in the heat zone or 10 minutes overall, which is a long cry from 1½ hours as formerly required.

The original paint formula as perfected for the old method of production, is still used.

Production at Hayes includes such as bomb finns, plywood and oak seats, radiator core housings, automobile fenders, fender brackets, radiator shells and a range of hardware items which represent real flexibility. The total weight run through the oven is 46,375 lbs. per hour. They have never experienced any temperature drop, regardless of the size or kind of load. They state that they have never been able to match colors on parts as evenly as they have since the conversion of this oven to employ Burdett "infra-red principle" gas burners.

The Hayes Manufacturing Co. is at present including many items in their postwar plans that they have been afraid to cope with in the past, purely on the strength of this oven performance.

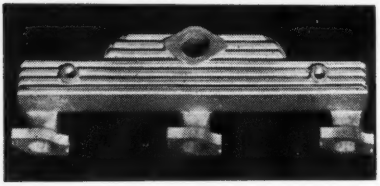
# New Products

## Manifold

Ellis Manifold Co., 2514 Santa Ana St., Huntington Park, Calif.

Bu-Power Manifold for all types internal combustion engines.

This manifold is designed to permit lower operating temperatures on engines using butane or propane for fuel. Design of the manifold makes available 73% more area than the stock gasoline manifold. It also maintains 60% lower operating tempera-

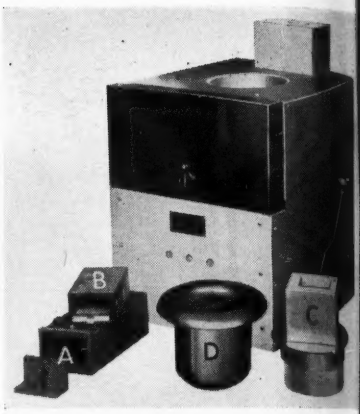


ture. This is made possible by the presence of elaborate cooling fins on top side of manifold.

Temperatures are also reduced because manifold is detached from exhaust, allowing proper circulation of air between the two. It is designed to allow perfect distribution of gas to all cylinders, under all operating conditions. Better performance is made possible as expansion of gas in manifold is kept to minimum at all times. This manifold allows use of larger carburetor and venturi, resulting in more power and more mileage.

## Bench Furnace

Designed to fulfill the requirements of a wide variety of applications, a new "three-way" bench type universal laboratory furnace is now available from Surface Combustion Corp., Toledo, Ohio. Controlled operation




**Laboratory furnace with accessory equipment including (A) muffle, (B) protective atmosphere equipment (C) plug, and (D) pot.**

over a wide range of temperature further enlarges its field of use.

The furnace combines three different types of furnaces in one casing. It may be used as a direct-fired oven unit at temperatures from 300 to 2400°F.

Such operations as annealing, carburizing, hardening, cyaniding and tempering, with or without a furnace atmosphere can be handled by the one furnace. It functions as a direct-fired oven, indirect heated muffle, gaseous atmosphere, salt or lead bath type and may also be used for melting soft and light metals such as tin, lead, aluminum, magnesium, etc.

## L.P.G. Equipment Co. Changes Name to Diablo Co.

E. C. McEneany, long operating under the name of The L. P. G. Equipment Co. at Walnut Creek, in northern California, has changed his company's title to Diablo Co.

Mr. McEneany specializes in domestic installations throughout the Walnut Creek area.

# A Triple-strength OPPORTUNITY for LP-gas companies!

There's a tremendous water heater market ready and waiting.

There'll be plenty of profit in it, too... for LP-gas companies who handle Ruud Automatic Gas Water Heaters with Monel* Tanks.

The day is not far off when you'll have this *triple-strength* line to offer your customers.

When you sell Ruud, you're not selling *just* a water heater. You're selling *perfect hot water service*, the kind of service your customers expect. And here are the reasons this is a *triple-strength* sales proposition:

1. **RUUD,** manufacturers of water heaters since 1889, is a recognized leader in the field.
2. **LP-GAS,** the blue-ribbon fuel. It's clean, convenient, economical . . . and *dependable.*
3. **MONEL,** the rustproof nickel alloy. Makes tanks long-lasting and trouble-free, thus reducing service and maintenance problems.

## Look ahead . . . NOW!

A profitable postwar business can be yours. *Be a Ruud-Monel Dealer.* A complete line of improved water heaters for all household and many commercial uses is ready for production as soon as restrictions are eased.

You'll have powerful national advertising behind you, and a lot of additional sales helps to enable you to meet . . . and overcome . . . any competition.

Selling days are ahead. But planning days are *now.* Send the coupon for details of one of the most profitable dealerships in the water heater field. And do it *today* . . . while dealerships are still available in many communities.

*Reg. U. S. Pat. Off.

RUUD GAS MONEL . . . perfect partners for Automatic Hot Water Service

RUUD MANUFACTURING COMPANY, PITTSBURGH 1, PA.

## $H_2O$T STUFF

*George Westinghouse was an inventor of gas equipment before he turned to electricity. And one of his right-hand engineers in those days was Edwin Ruud, inventor of the Ruud Automatic Gas Water Heater.*

★ ★ ★

Thirty-four years later, there was another Ruud-Westinghouse tie-up when Westinghouse used one of the first of all commercial programs on the air—the Ruud Light Opera Hour—in its first experiments with shortwave broadcasting between Pittsburgh, Pa. (KDKA), and Springfield, Mass. (WBZ).

★ ★ ★

*The Ruud-Monel Automatic Gas Water Heater is a germ-chaser, a body-freshener, a fatigue-chaser, an emergency first-aider and a budget befriender.*

★ ★ ★

Some day it can be told—ALL the wonderful ways Monel is serving in the war. War-time performance is the best guarantee of peacetime satisfaction. Sell a Ruud-Monel and you make a friend.

★ ★ ★

*The new Ruud Multi-tube Automatic Gas Water Heater is now in production. Nineteen sizes are made to serve many commercial and industrial requirements. Write for a catalog.*

SELL AN ESTABLISHED, ACCEPTED WATER HEATER

RUUD MANUFACTURING COMPANY
2934 Smallman Street, Pittsburgh 1, Pa.

I'm interested in selling the Ruud-Monel line in my community. Please send me full information.

Name.....

Company.....

Address.....

City.....Zone.....State.....

B-P N 10-45

# THE TRADE

**The Ward Heater Co.**, Los Angeles, through its general manager, R. O. Montrief, announces the appointment of J. B. Hill as the exclusive distributor of the Ward line of liquefied petroleum gas furnaces in California.

Mr. Hill is widely known throughout the West because of his long association with the B-P Gas industry. In addition to the Ward line, he also represents many other manufacturers of liquid gas appliances and equipment. He was formerly associated with the Associated Oil Co.

The Ward plant is being rapidly converted from its war-time work and expects to be in full production soon.

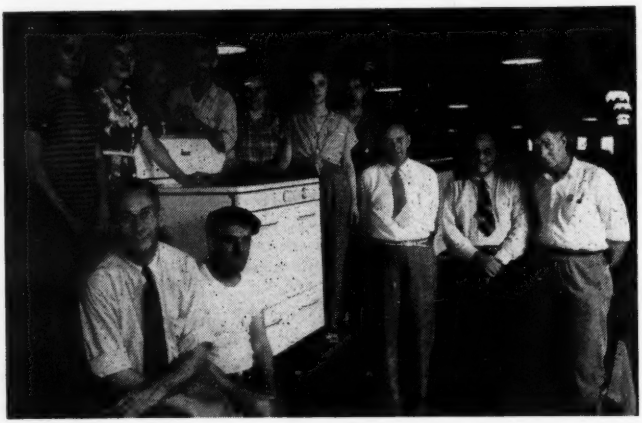
The first Estate "Heatrola" gas range to be produced since July, 1942, came off the assembly line at **The Estate Stove Co.'s** plant at Hamilton, Ohio, on Aug. 6. Production will be limited, at present, to the Model 1703 and will be produced for artificial and natural gas only. This decision was reached so that complications of reconversion could be held to a minimum.

After the first run of natural and artificial gas models is completed, Estate will produce a quantity of the same model for B-P Gas and this production will be followed by the Model 1704 for all three types of fuel.

**The John E. Mitchell Co.**, of Dallas and St. Louis will begin the manufacture of a line of B-P Gas vaporizers in the very near future. They have acquired rights, under patents belonging to the **J & S Carburetor Co.** of Dallas, to manufacture vaporizers for country homes and for smaller industrial applications.

The J & S Carburetor Co. will continue to manufacture special vaporizing equipment in the larger capacities.

Greatly increased service facilities for the users of truck-trailers throughout the West are being provided by the **Fruehauf Trailer Co.**, Los Angeles, which has just announced that branches in nine West-



**The first Estate "Heatrola" gas range to be made since production stopped in 1942 is coming off the assembly line.**

A NAME THAT STANDS FOR QUALITY

# McNAMAR L-P GAS TRUCK TANKS

"WITH PROVEN PERFORMANCE"

PROPANE BUTANE

GREATER PAYLOAD HIGH TENSILE STEEL

MATERIALS IN STOCK FOR EARLY DELIVERY

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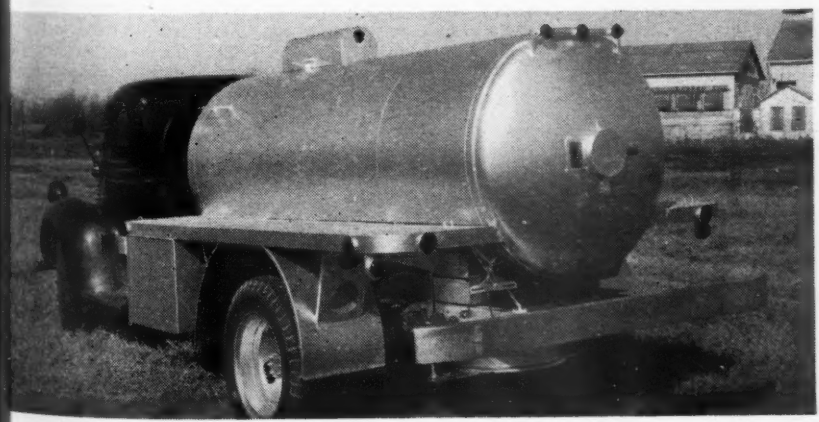
Write or Wire for Specifications and Prices

SPECIALIZING IN YOUR TRANSPORT PROBLEMS

## McNamar Boiler & Tank Co.

P.O. BOX 868 TULSA, OKLAHOMA



ern cities now have building projects completed or well under way.

R. S. Kirksey, Fruehauf vice president, has released details of expansions by the Seattle, Salt Lake City, Fresno, Phoenix, Spokane, San Diego, Portland, El Paso and Billings, Mont., branches of the company.

**Shields-Harper Co.**, Los Angeles, has been named the West Coast distributor for the new line of butane-propane dispensing units now being manufactured by Adel Precision Products Co., Burbank, Calif.

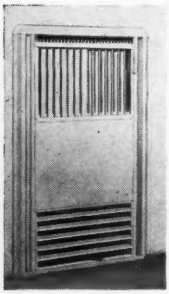
Keith B. Miller, general sales manager of the **Tappan Stove Co.**, has announced the return of the five Tappan field representatives to their prewar territories.

The five representatives and the territories they will supervise are: D... J. Thomas, western half of New Yo... State; Chester A. Pridham, New Je... sey; Homer W. Smith, West Virgini... Roy D. Oplinger, Oklahoma; and Ha... old E. Myers, Louisiana.

Mr. Miller also announced that mo... representatives would be returned ... their territories as soon as a grea... domestic range production could ... met.

**The Chicago Bridge & Iron C...** Chicago, announces the publication ... a new 9-page leaflet, "The Horto... spheroid," which describes the redu... tion of evaporation losses from vol... tile liquids by storing them und... pressure in Hortonspheroids.

The reduction of filling, boiling a... breathing losses are discussed t... gether with a description of the ...

COMMONWEALTH
VENTED DUAL WALL HEATERS

*Immediate delivery . . .*

• These EASILY INSTALLED vented gas dual wall heaters ... furnished with burners for either Butane/Propane or natu... gas, as ordered. Available for Butane or Propane in 5 siz... 18000, 24000, 34000, 44000, and 53000 BTU. Venetian-blind eff... grills which stay cool and can be painted to match interi... Entire unit built neatly right IN THE WALL. Approved ... AGA, and meet FHA requirements.

JOBBERS' AND DEALERS' OPPORTUNITY now—write or ... phone for illustrated folder, special price schedule, etc.

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HEAT CONTROL, LTD.
LYNWOOD • CALIFORNIA

tings included with Hortonspheroids.

Gaging methods, including theoretical gage tables, tank strappings and water calibration, are described. A copy of the booklet will be sent on request.

A release by the board of directors of **Anchor Petroleum Co.**, Tulsa, Okla., announces the election of David L. Gordon to the office of vice president.

Mr. Gordon has been associated with Anchor for a number of years and has long been identified with the petroleum industry. He will maintain offices in the Second National Bank Bldg., at Houston, Texas.

The New Orleans and Birmingham plants of the **Rheem Manufacturing Co.** will be among 12 continued in operation by the company, R. B. Rheem, president of the company, announced.

Mr. Rheem said cancellation and cutbacks of ordnance and ammunition contracts had not affected steel shipping container manufacture and this phase of production will continue for the balance of 1945.

Featuring the uses of lubricants in lubricated plug valves, **Merco Nordstrom Valve Co.** has just released a new and completely reedited manual.

It gives complete instructions in application of valve lubricants and lists 40 types in stick and bulk form, including a silicone type. More than 10 specific valve services are included with corresponding lubricant recommendation, for various conditions of line fluid, temperature and pressure.

A copy may be obtained by any user of Nordstrom valves. The manual

**For Bulk Stations, Tank Trucks, and above and below ground systems.**

★ **LP-GAS CYLINDER VALVES** are listed as Standard and for re-examination service by Underwriters' Laboratories, Inc.

★ **GLOBE, LINE AND ANGLE VALVES**—Diaphragm Packless and Wing Cap—in Flare sizes from ¼" to ⅝" O.D.; Sweat sizes from ⅛" to 2⅛" O.D.; F.P.T. sizes from ½" to 2".

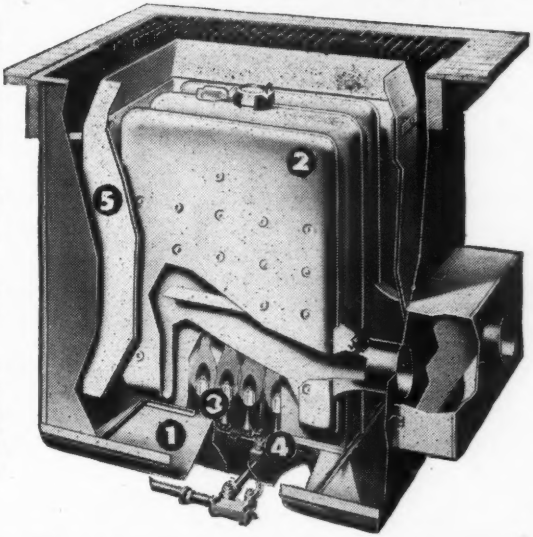
★ **SIGHT GLASSES**, suitable for any normal LP-Gas pressure. Entire top assembly removable without soldering lines to body.

★ **FLARE FITTINGS**, including Unions, Couplings, Adapters, Elbows, Tees and Nuts — listed as Standard by Underwriters' Laboratories, Inc.

**SUPERIOR**
**VALVE & FITTINGS COMPANY**
**PITTSBURGH 26, PENNSYLVANIA**

# A Big Help For Dealers Who Want To Get Into The LP-GAS HEATING MARKET

1. Exclusive Coleman streamlined bottom for increased warm-air flow
2. Big combustion chamber with double radiators gets most heat from fuel
3. Powerhouse burner especially engineered for LP-Gas to give top burning efficiency and economy
4. Automatic safety pilot with 100% positive shut-off of fuel
5. Inner Double Walls live air insulated; insure continuous air circulation through furnace; outer casing always cool; easily removed for cleaning inside furnace




## Engineered "From The Ground Up" For LP-Gas

### First to Win A.G.A. Approval

The features shown above are only a few of the ones that make dealers say: "The Coleman LP-Gas Floor Furnace really put me in the heating business—with its big gallonage sales!" This is not just a "converted" natural-gas floor furnace! Its burner is engineered from the start to get the most heat out of LP-gases and satisfy users of the economy and efficiency of this fuel. It is built with safety features like the positive fuel shut-off that protect you as well as your customers. Over-all Coleman engineering, too, creates "Warm-Floor" comfort that made Coleman famous! Write now, and get the full story of the Coleman LP-Gas Floor Furnace and the Coleman franchise. The Coleman Company, Inc., Dept. BP-544, Wichita 1, Kansas.

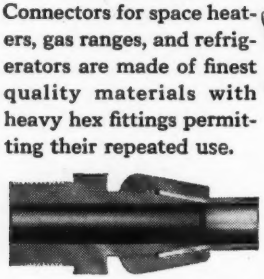
THE COLEMAN CO., INC., • Wichita 1 • Philadelphia 8 • Los Angeles 54 • Toronto, Can.

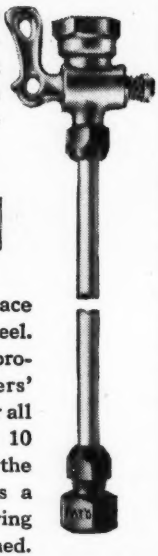
AUTOMATIC LP-GAS **Coleman** FLOOR FURNACE

**Superseal**
**Space Heater Connectors**
**in all types including**
**those with Gas Stops**

*Available Now!*

Superseal Gas Appliance Connectors for space heaters, gas ranges, and refrigerators are made of finest quality materials with heavy hex fittings permitting their repeated use.





Superseal Fittings for space heater connectors are of steel. Parkerized for corrosion protection and Underwriters' Laboratories approved for all hazardous gases. Long 10 degree tapered cone of the Superseal Fitting assures a leak-proof seal. No shearing action when nut is tightened. Repeated connection will not damage tubing or fitting. Tubing can be bent close to fitting.

Catalog sheet gives complete description. Connectors are available now at your wholesale distributor.

**COLUMBIA MALLEABLE**
**CASTINGS CORPORATION**
**SUPERSEAL CONNECTOR DIVISION**
**COLUMBIA, PA.**

No. V-105, Rev. 6. Address Merc Nordstrom Valve Co., 400 Lexingto Ave., Pittsburgh 8, Pa.

As part of their broad, peacetim marketing program, W. Frank Rob erts, president of **Standard Gas Equip ment Corp.**, announces the election of Herbert C. Erhard, general sales manager, as vice president in charge of sales at a meeting of the board of directors held July 30, at Baltimore.

H. C. ERHARD

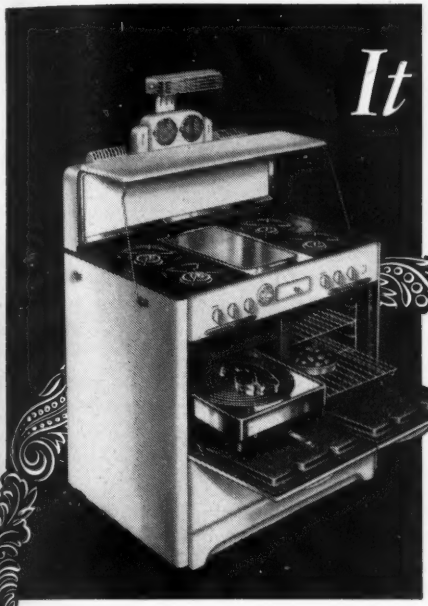
Mr. Erhard will have complete direction of sales of present products as well as new products that may be added. In addition he will direct all advertising and promotion programs.

After 43 consecutive years of service with the **American Stove Co.** Ernest Martin retired recently. A sales representative attached to the company's Northern sales division office in Chicago, he had served in recent years as a sales supervisor.

Mr. Martin is being succeeded by Ray Ehlert, who sold the company's "Magic Chef" ranges in the Chicago area prior to the war.

## Firm Plans Distribution Of B-P Gas in Mexico

Announcement of the establishment of an organization for handling a line of gas appliances such as water heaters, ranges and space heaters, domestic and commercial, and B-P Gas equipment by the International Export and Import Co., Mexico City, has



# *It won't be long now!*

*Only O'Keefe & Merritt has the Vanishing Shelf and Grillevator Broiler*

***O'Keefe & Merritt Gas Ranges will soon be back!*** In every respect they will be the finest O'Keefe and Merritts ever to bear the name.

This new O'Keefe & Merritt will be distinguished in every detail–styled for the most exacting buyers. It will be precision-built by the same men and women of O'Keefe & Merritt who won the highest award for precision war production. And it will exhibit the advanced features, design and beauty for which O'Keefe & Merritt alone is renowned.

**O'KEEFE & MERRITT**

3700 East Olympic Blvd. • Los Angeles 23, California

been made by Hugh R. Lamberth, general manager of that company.

Mr. Lamberth was formerly connected with the Fluor Corp., and the Southern California Gas Co., Los Angeles.

In the announcement of this line, Mr. Lamberth states that the supplying of liquefied petroleum gas and appliances is becoming a big business in Mexico as most of the cities of the Republic, including Mexico City, have no municipal gas supply, either natural or manufactured, and he believes that the sale of appliances is tied directly to butane supply sources.

Interested in representing liquefied petroleum gas interests of United States manufacturers in Mexico, this company's offices are located at San Juan De Letran No. 9, Noveno Piso, Mexico, D. F., and the firm title is Compania Exportadora E Importadora Internacional, S. A.

## LPGA Asks Members For Ideas on Future Meetings

From various sections of the country inquiries have been received about the Liquefied Petroleum Gas Association plans for holding sectional meetings in the near future. The principal concern of the members is the status of appliances and equipment for immediate expansion of their activities. Travel and hotel accommodations are still limited and offer some immediate handicaps.

In order to plan for such meetings appropriately and to avoid placing unnecessary burdens on those who are vitally concerned, it is desirable to obtain some expression of opinion from all association members. Members are requested to express their views.

Do you have pet subjects for consideration? Do you want exhibits or should they be held only at National

YOU'VE had to wait a long time but knowing what whiskered gent was closest behind the closed door of the inner office, you have waited patiently and good-naturedly.

Busy as we were with Uncle Sam's urgent business, we were thinking about you and doing all we could to fill *your* orders. Then too, when anybody had a minute to spare he was planning and scheming to cut the time necessary to shift from war production to your production. As a result, we think we've set some kind of a record in reconversion. We had our machines all ready for the switch at a minute's notice. We had the crew all picked and set for the job. We took advantage of layoffs in other plants to *increase* our force.

Yes, we're cutting deep and fast into the stack of unfilled orders. And with our great increased production capacity, we're going to continue pulling them from the bottom as fast as you can pile them on top.

HAYS MANUFACTURING CO., ERIE, PA.

# You Can Always

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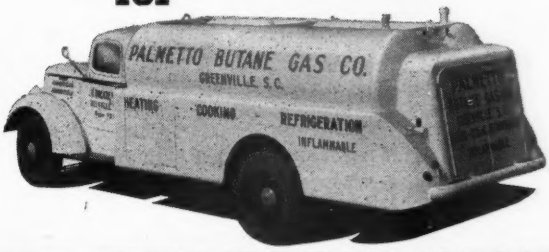


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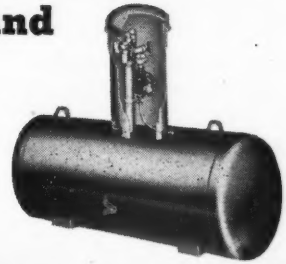
and

PETROLEUM



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BUTLER MANUFACTURING COMPANY • 7410 EAST 13TH ST., KANSAS CITY 3, MISSOURI

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## A world of water from a world of PEERLESS PUMPS

Now offering the most complete line of vertical and horizontal pumps, Peerless can supply the exact type of pump best engineered for your well. If you are planning to "step up" your water supply, consult with Peerless. You will benefit by new Peerless developments—increased precision, design improvements and enlarged field service.

### Two improved Domestic Systems Peerless Water King and Jet

The Peerless *Water King* Pumping System, for shallow wells and the improved Peerless *Jet* Water System for deep or shallow wells. Both systems are 100% automatic. *Water King*—up to 1300 gallons per hour; *Jet* up to 5000 gallons per hour.

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meetings? Here is a chance to help mold these meetings to the pattern you think most constructive and helpful to the industry.

Appliances and Equipment manufacturers are particularly requested to give their views regarding the phases of such meetings.

Express your opinions in writing to Frank R. Fetherston, secretary of the association, 11 W. 42 St., New York.

## CNGA to Hold 20th Annual Fall Meeting

The 20th Annual Fall Meeting of the California Natural Gasoline Association to be held Friday, Oct. 12, at the Los Angeles Biltmore hotel, will take the form of discussions of the postwar problems now confronting the refiner, producer, and natural gasoline manufacturer.

M. L. ARNOLD

"For the past nineteen years," says Marion L. Arnold, president, "the California Natural Gasoline Association has held a Fall Meeting at which problems of immediate importance to the petroleum industry are discussed. This year the subjects uppermost in the minds of the industry are those of converting from a war time basis to normal operations. This involves finding a use for the millions of dollars worth of equipment installed for the production of stock used in the manufacture of 100-octane aviation gasoline and of finding a use for the light hydrocarbons, the production of which has been increased tremendously to meet the needs of the

# Coming. . .

## THE GREATEST WATER HEATER OF ALL TIME

## Pittsburg

Without a doubt, our new, greater models will be the finest water heaters ever built in our fifty years of manufacturing. Beautifully designed, skilfully engineered for all types of gas and electricity, they will be proudly displayed and easily sold from coast to coast.

Wise distributors and dealers are planning to do business with PITTSBURG for increased sales, more profit, and completely satisfied customers.

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**WATER HEATER CORPORATION**

PITTSBURGH, PENNSYLVANIA

100-octane aviation gasoline program."

Highly qualified speakers from the natural gasoline, refining and production departments of the oil industry have been selected by W. L. Rifenberick, and his Fall Meeting committee to discuss these and other important reconversion problems.

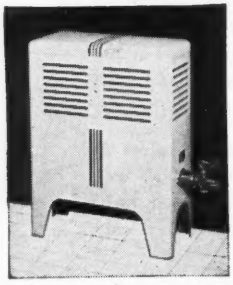
In the morning session, H. A. Gehres, vice president of the Cooper-Bessemer Corp., will talk on the design of high pressure compression cylinders for use in recycling or pressure maintenance plants, while E. W. McAllister, chief engineer of the Western Gulf Oil Co., will present some entirely new ideas on the subject of forecasting production and production methods based upon subsurface geology and reservoir data.

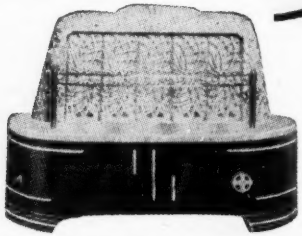
In the afternoon session, M. M. Perkins, process engineer of the M. W. Kellogg Co., will talk about the various means of utilizing the surplus stocks of light hydrocarbons now available. Next on the program, F. D. Parker, consulting engineer, will discuss the conversion of equipment installed for the manufacture of 100-octane stocks of postwar products. With the end of the war the veil of secrecy has been lifted from many of the important war-time activities of the refiner. One of the first of these stories to be released will be told at CNGA's fall session by Fred Hartley of the Union Oil Co. of California who will tell how toluene is manufactured from petroleum fractions by the use of azeotropic distillation.

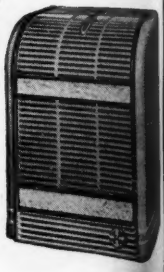
As customary, members and guests attending the 20th Annual Fall Meeting of the Association will turn from the serious business of the meeting to enjoy the annual banquet, followed by an evening of fun and relaxation provided by Earl A. Brock and his entertainment committee.


Armstrong

QUALITY SINCE 1899







No. 10-C Bathroom Heater —1-pc. body finished in white porcelain enamel. Cast iron burner, adjustable air mixers. 14½" high.

No. 690 Radiant Heater (center) — Finished in brown vitreous enamel. 17¾" high. 20,000 or 24,000 B.T.U.

Through the war years our reconversion plans have been set for a rapid turnover to civilian goods. We're now in full swing producing these popular heaters. Place your order immediately for earliest delivery.

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DEPT. BP HUNTINGTON, W. VIRGINIA

No. 900 Circulating Radiant Heater—Designed for proper combustion to produce both radiant and circulating heat. Brown porcelain enamel finish. 19" high. 18,000 or 28,000 B.T.U.

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If you are planning a liquefied petroleum gas distributorship or expansion of your present facilities, investigate the "extras" offered by . . .

**We invite you to contact our nearest District Office and ask a Phillips representative to explain our plan for increasing your profits.**

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For Truck Mounting Capacity 50 gpm at 500 rpm.

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MODEL M-1044 — For direct Electric Motor drive. Capacity 20 gpm at 1800 rpm.

MODEL M-2 — For direct Electric Motor drive. Capacity 50 gpm at 1800 rpm.

MODEL M-3 — For direct Electric Motor drive. Capacity 100 gpm at 1800 rpm.

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## P. S. Magruder Steps Up With General Petroleum Corp.

P. S. Magruder who has occupied the position of manager of the gas department of the General Petroleum Corp., Los Angeles, has been appointed assistant manager of manufacturing.

P. S. MAGRUDER

Mr. Magruder joined his company in 1925 as gas tester in the gas department at Vernon; subsequently was promoted to gas engineer; next, to general superintendent, and then to manager of the gas department. He is chairman of District 5 Industry Committee of the Petroleum Administration for War and is a past president of the California Natural Gasoline Association.

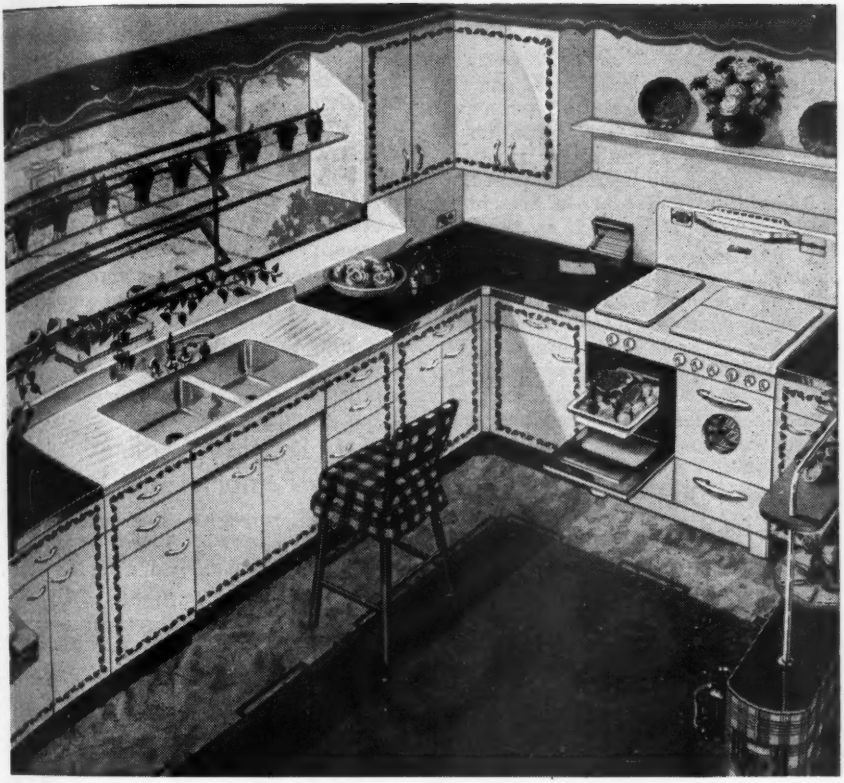
H. L. Eggleston, formerly with the Gilmore Oil Co., has been named to succeed Mr. Magruder as manager of the gas department.

## New B-P Gas Plant Planned For Hermecio, Mexico

Plans for the completion of a new B-P Gas bulk storage plant at Hermecio, Sonora, Mexico, have been announced by Luis Sierra Aguilar, president of Planta Almacenadora De Gas, S. A.

Equipment for the new plant is under construction in California and is expected to be installed at an early date.

Bulk capacity of the plant will be 21,000 gallons, suitable for either butane or propane and fuel is to be shipped in by rail in the firm's own tank car.



**DREAMLINED KITCHEN!** This is it. This is the type of kitchen that women are dreaming of, that architects and builders are planning to make a reality in the homes of tomorrow. The beautiful ESTATE HEATROLA RANGE—equipped for LP-Gas—will be the center of many of those kitchens. For the ESTATE HEATROLA RANGE has always been the range that's years ahead in features. Estate was first to introduce modern table-top design to change the whole trend of kitchen planning. First to introduce the Air-Flow oven, the Grid-All, the Bar-B-Kewer and other features for extra convenience and efficiency.

***Estate Heatrola Ranges for LP-Gas are made by THE ESTATE STOVE COMPANY, Hamilton, Ohio. • First with the finest for over 100 years.***

## Rail Travel Controls Not All Revoked

Revocation or relaxation of some of the war-time controls of passenger transportation and the retention of others as long as military travel remains heavy have been announced.

Remaining ODT controls are chiefly those on rail travel such as the five-day limit on reservations. The elimination of overnight sleeper service and the pooling of passenger coaches are being continued. Certain highway transport controls also remain.

New civilian passenger equipment will not be available until early in 1946 when several hundred new passenger coaches will be produced.

## Standard Oil (N.J.) Re-Employs 93% of Old Employes

Proving that the G. I. Bill of Rights is a workable plan in the instances of employment, Standard Oil Company of N. J. has announced that more than 93% of its employes recently discharged from the armed services have returned to work for that company and its affiliates.

In addition to old personnel, Standard reports that it has hired approximately 2000 returned veterans who were not previously employed by their company.

The program of this company gives the veteran his old job, or one comparable to it, in addition interviewing him to learn of added skills acquired while in the services that would qualify him for a better position.

## Safety Program Outlined In New Pamphlet

A specific program designed to help industry meet the threat of an increased accident toll under the changed conditions of the post-war


# STORAGE TANKS AVAILABLE

**We have the following Storage Tanks available for November delivery:**

Size 15,000 W. G. Working Pressure 200 lb. U.69 for Propane
Size 18,000 W. G. Working Pressure 200 lb. U.69 for Propane
Size 26,000 W. G. Working Pressure 200 lb. U.69 for Propane
Size 18,000 W. G. Working Pressure 125 lb. U.69 for Butane

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Gas Systems—Truck Tanks—Transports—Storage Tanks

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Regulator Manifolds
Regulations—Equipment Selection and Installation
LP-Gas Pipe Lines
Testing for Leaks and Adjusting Burners
Fundamentals of Thermostats
Pilots and Pilot Controls
Burner Design and Application
Appliance Conversions
Facts About Water and Water Heaters
Types of Water Heaters
Selecting and Installing the Water Heater
Competitive Fuels—Wood
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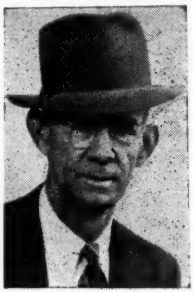
ST. PAUL TORONTO

period is recounted in a 16-page pamphlet, "Industrial Safety Tomorrow," produced by the National Safety Council.

Highlights of the pamphlet, which can be obtained without cost from the National Safety Council, Chicago 6, Illinois, include the following topics:

Safety organization, inspections, accident records, first aid and medical facilities, buildings and grounds, machinery, guards and equipment, personnel selection and training, maintaining interest, re-employment of service men and women and off-the-job safety.

## H. O. Bailey Appointed Chief Inspector for B-P Gas



H. O. BAILEY

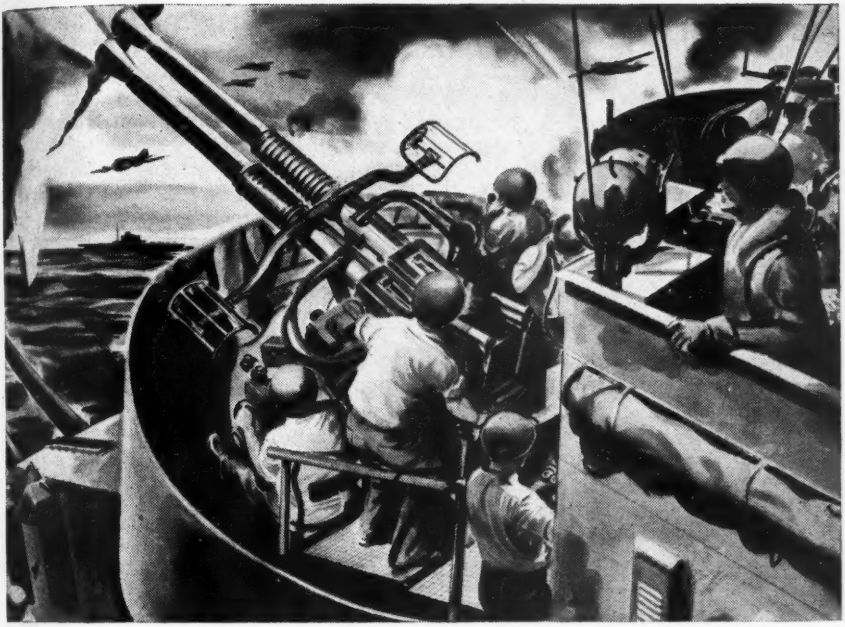
H. O. Bailey has been appointed by the Governor and Chief Inspector of the State of Mississippi as chief inspector of the liquefied petroleum gas division of that state, according to a recent announcement.

Mr. Bailey has been field inspector of the liquefied petroleum gas division for the past five years, his duties being the inspection of tanks and installations.

## All Tank Car Restrictions Have Been Revoked

The OPA has canceled all restrictions covering the movement of petroleum products by railroad tank cars and by tank trucks.

The former tank truck restrictions covering the number and types of deliveries are now also revoked.



# Remember "Battleship X"?

**Remember when "Battleship X"** knocked 32 Jap planes from the sky? Remember the accuracy with which Navy big guns sink Jap ships and pound shore installations? Robertshaw thermostats for America's famous gyroscopic gunsights help write such headlines.

This new, amazingly accurate thermostat controls to within half a degree the temperature of the oil in which the gyroscopic mechanism of the gunsight revolves. This in turn insures uniform functioning of the gyroscopic action under all climatic conditions and makes an important contribution to accurate fire control.

That's but one of the stories of how Robertshaw research and manufacturing skill are serving our country in this war. But all are essentially the same story — a story of skilled research, precision manufacture, expanded facilities. All point to the same peacetime result — better, more dependable Robertshaw thermostats for new ranges.

*Even More Than Before* **YOU CAN DEPEND ON**

**Robertshaw**

**THERMOSTAT COMPANY · Youngwood, Pa.**

# "Mopping Up" The War Orders

WHILE primary restrictions affecting the liquefied petroleum gas industry were lifted in August, setting free a host of eager men on the sales fronts, there were a few orders still in force which were not cancelled till later, and at least one—price control—is due to be retained until dangers of inflation have been eliminated.

Releases from Washington since the September issue of Butane-Propane News went to press which are of interest to dealers and manufacturers are briefed herewith:

All restrictions on construction of private homes and other buildings will be lifted on Oct. 15, according to Reconversion Director John W. Snyder. Efforts of the OPA to have price ceilings retained on new dwellings were unsuccessful.

Simultaneously the War Production Board announced that Limitation Order L-41, affecting commercial and industrial construction, would be revoked on the same date. Inventory controls will be strengthened to prevent hoarding of building materials.

•

WPB ended the Controlled Materials Plan formally on Sept. 30 and all fourth quarter allotments of steel, copper and aluminum are cancelled as of Aug. 22.

To break bottlenecks in reconversion materials a civilian "CC" preference rating has been introduced, par-

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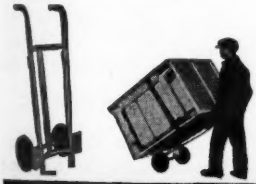

# Gas Cylinder Truck —

## Easy Handling — Saves Lawns

- ALSO FOR STOVES, BOXES, CRATES
- PNEUMATIC RUBBER TIRES AVAILABLE NOW

An all purpose, one man truck for moving both cylinders and appliances. No more back-breaking lifting, either. Tapered body gives operator ample room between handles. Cradle construction accommodates any size cylinder up to 100 pound capacity. Wide Bottom flanges give support for appliances. Web strap (optional) holds appliance rigidly. Rounded handle grips permit skidding from end of delivery truck. Time saving, labor saving, cost cutting. Available now.

Write for prices and folder.

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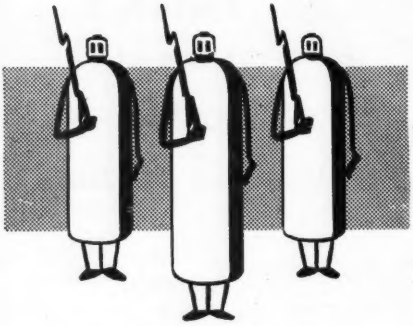
# NECESSITY PROVES



# LP-GAS VERSATILITY

The war proved many times that necessity is the mother of invention; proved the unprecedented utility, flexibility and versatility of Sinclair's LP-Gases—found many uses for Butane and Propane which will represent new and expanded markets in the future and post-war period.

Plan TODAY to take advantage of new opportunities TOMORROW. Why not write us today regarding your requirements?

**SINCLAIR PRAIRIE OIL COMPANY**

Liquefied Petroleum Gas Division

Sinclair Bldg. Tulsa, Oklahoma


ticularly to aid small business. From Oct. 1, the new order of ratings will be AAA (top priority), MM (Military), and CC (civilian).

•

Industry advisory committees of an over-all type will be retained on an "on call" basis until the War Production Board is liquidated, WPB announced today, in issuing supplementary rules to govern its advisory groups.

During the present demobilization and reconversion period, certain industry committees that represent segments of major industries will be dissolved. Over-all type committees will continue to function.

•

WPB controls will be rudimentary. They will cover crude rubber, for a short while textile, tin and one or two other items. In addition, there will be a few WPB curbs designed to prevent a price inflation. Most important among these is the continued restriction on inventories. If prices soften, even these won't be enforced. Meanwhile, WPB itself is being greatly reduced but not dissolved.

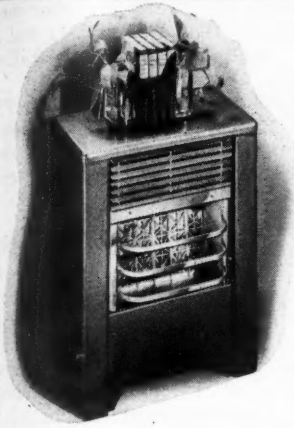
•

Because controls over the production of Class A products in wartime labor shortage areas are no longer necessary, Controlled Materials Plan Regulation 10 was revoked Aug. 31 by the War Production Board.

Class A products are those which contain steel, copper or aluminum fabricated or assembled beyond the forms and shapes specified in Schedule I of CMP Regulation 1, other than such steel, copper or aluminum as may be contained in Class B products incorporated in them as parts or subassemblies.

•

A burden of "paper work" for industry and the War Production Board has been eliminated by providing that manufacturers do not have to return



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### FAMOUS HI-CROWN BURNER

BLUE FLAME PILOT LIGHT

Leading L.P.G. Distributors from coast to coast rate it the finest of all burners for Butane. It "performs" without coaxing, constant cleaning or adjusting. Its quiet, odorless operation, great flexibility and reserve capacity insures your customers being completely satisfied.

### FEATURES THAT SELL

A.G.A. Approval, Hi-Crown Burners, Automatic Lighting, Syphonaire Chassis, and Air Insulated Cabinets are features your customers want. Finer—Safer heaters, yet priced unbelievably LOW. Write for literature.

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allotments ("tickets") for controlled materials when they are no longer needed, WPB announced Aug. 31.

•

A statement of manpower requirements is not necessary hereafter in making appeals from War Production Board orders, regulations or administrative actions, WPB announced Aug. 31.

•

Small manufacturers, operating under Priorities Regulation No. 27, were notified by the War Production Board Aug. 29 that despite the directions of earlier regulations, they would not be permitted to use their AA-4 rating and Z-3 allotment symbol after Sept. 30.

Interpretation 2 to PR 27, issued Aug. 29, calls attention to the fact that despite the provisions of the regulation that permit the use of the rating and allotment symbol to Dec. 31, issuance of PR 29 has shortened the period so that AA ratings and Z symbols will be invalidated after Sept. 30.

Manufacturers operating under PR 27, who need priorities assistance after Sept. 30 may apply under the terms of PR 28, provided they can meet the conditions.

•

To supplement a general announcement of a new provision effective Sept. 15, for individual price adjustments of specified items for manufacturers who can show that they face production at a loss under existing ceiling prices, the Office of Price Administration gave the following explanation:

No adjustment, OPA said, will now be made under this action that could be made under Supplementary Orders 118 to 119, the reconversion individual adjustment orders of July 23.

The list of eligible items, contained


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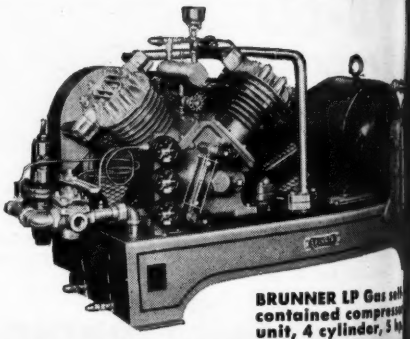

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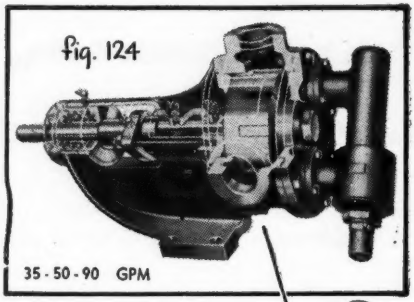


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in an appendix to the action, contains a wide variety of goods, from raw industrial materials to consumer items. In general, they are commodities now covered by regulations that do not have adequate provision for price adjustments. Usually, OPA explained, the addition to such regulations of adjustment provisions has not been administratively feasible, and a few manufacturers have suffered hardship under existing ceiling prices without any means of relief.

•

A plan designed to assure every returning veteran entering industry full credit for war-gained trade skill experience is now being prepared by the Apprentice-Training Service of the War Manpower Commission, Paul V. McNutt, WMC chairman, announced in late August.

Mr. McNutt said the program now being drawn up should operate in many cases to reduce the length of required apprenticeship service of veterans entering various crafts. It is being developed by the WMC Apprentice-Training Service in cooperation with management, labor and veterans organizations and will be subject to modification by State laws and trade conditions in various areas.

•

The nationwide 35-mile-an-hour speed limit was lifted on Aug. 19 by the ODT.

The ODT director urged all motorists to have their vehicles checked thoroughly before attempting to increase regular speeds. Particularly important are tires, engine timing, brakes and steering gear.

•

Prime contractors and subcontractors receiving cutbacks or cancellations of military orders must promptly withdraw the ratings they have extended to their suppliers, the War Production Board ordered Aug. 31.

*Many Thanks . . .*

*. . . . for your numerous orders for SOUTHERN GAS SYSTEMS, since the release of LP Gas industry restrictions. While we can't always make immediate delivery, all orders will be filled as rapidly as possible from here and other points. Our endeavor is to serve you in the most efficient manner.*

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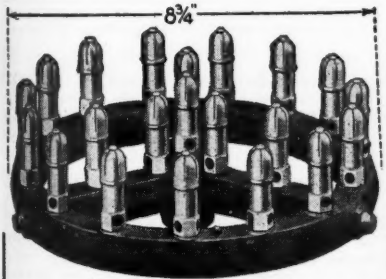


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### HELP WANTED

WANTED: SALES- ENGINEER, VETERAN preferred. L.P.G. field, covering sales of equipment and appliances also having operating experience. To cover California territory out of Los Angeles Office. Write Box 780, BUTANE-PROPANE *News*, 1709 W. 8th St., Los Angeles 14, California.

### SITUATIONS WANTED

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WANTED: PROPANE, BUTANE OR 7-70 cylinders any size; cylinder valves; regulators; bulk tanks; truck tanks; pumps and controls any size. Box 495, Syracuse, N. Y.

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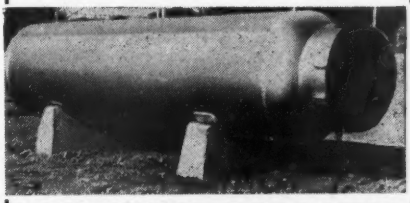

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